

Project Split

Managementsamenvatting
Government Support Package

6 oktober 2025

Afkortingen en definities

ANVS	Autoriteit voor Nucleaire Veiligheid en Stralingsbescherming
Businesscase	Financiële en strategische veronderstellingen van het project
Capex	Kapitaaluitgaven
CfD	Contract for Difference (Overeenkomst voor elektriciteitsprijs)
COD	Commercial Operations Date
DSCR	Debt Service Coverage Ratio
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation
EC	Europese Commissie
ECA	Exportkredietverzekeraars
EDM	Electricity Market Design
EMU	Europese Monetaire Unie
EPC	Engineer, Procure, Construct
Etara	Etara Partners Ltd
FID	Final Investment Decision
GSP	Government Support Package
IRR	Internal Rate of Return
KGG	Ministerie van Klimaat en Groene Groei
LCOE	Levelized Cost of Energy
Marktprijs	Groothandelsprijs vanuit het perspectief van de kerncentrale
MW	Megawatt
NPP	Nuclear Power Plant
O&M	Exploitatie en onderhoud
OECD	Organisation for Economic Co-operation and Development
Opex	Operationele uitgaven
PPA	Power Purchase Agreement (Overeenkomst voor elektriciteitsafname)
RAB	Regulated Asset Base (Overeenkomst voor inkomsten)
RoE	Rendement op eigen vermogen
SD	Senior Debt
SOE	State-owned enterprise (staatsdeelneming)
SPV	Special Purpose Vehicle
Strike Price	Uitoefenprijs

KPMG's heeft de opdracht gekregen advies te verlenen ten aanzien van de ontwikkeling van een voorkeurs-GSP

Het Ministerie van Klimaat en Groene Groei ("KGG") heeft KPMG gevraagd haar te ondersteunen in relatie tot de financiering en benodigde overheidssteun voor de bouw van twee kerncentrales

- KPMG is in samenwerking met Etara Partners Ltd ("Etara") gevraagd advies te geven over de financieringsstructuur en het benodigde Government Support Package ("GSP"). Specifiek ziet het advies toe op de volgende onderwerpen:
 - **Strategische ondersteuning:** strategisch advies over de opzet van de financieringsstructuur, waarbij gebruik wordt gemaakt van *lessons learned* uit vergelijkbare nieuwbouwprojecten voor kernenergie. Dit omvat advies over:
 - Belangrijke stappen en mijlpalen, analyse van de relatie tussen de financieringsstructuur en het technologieselectieproces (aanbesteding), risicoanalyses en het bieden van eerste inzichten in potentiële contractuele overeenkomsten tussen partijen.
 - De totstandkoming van een afwegingskader dat KGG ondersteunt bij het evalueren en vergelijken van verschillende inkomsten- en financieringsmodellen.
 - **Kwantitatieve beoordeling van de financieringsstructuren op projectniveau:** KPMG heeft een financieel model ontwikkeld voor het project, op basis waarvan:
 - Scenario- en sensitiviteitsanalyses zijn uitgevoerd die gebruikt worden bij het besluitvormingsproces, waaronder de staatssteunprocedure.
 - Een evaluatie van verschillende financieringsopties uitgevoerd is, waarbij voor- en nadelen van deze opties inzichtelijk zijn gemaakt.
 - **Kwantitatieve beoordeling van de financieringsstructuren op overheidsniveau:** KGG heeft gevraagd om de impact van verschillende financieringsstructuren op de overheid inzichtelijk te maken.
 - Dit omvat het evalueren van opties zoals subsidies, garanties en directe investeringen, en het beoordelen van de langetermijneffecten van deze instrumenten op de overheidsbegroting.

KPMG heeft de werkzaamheden gestructureerd in vijf werkstromen

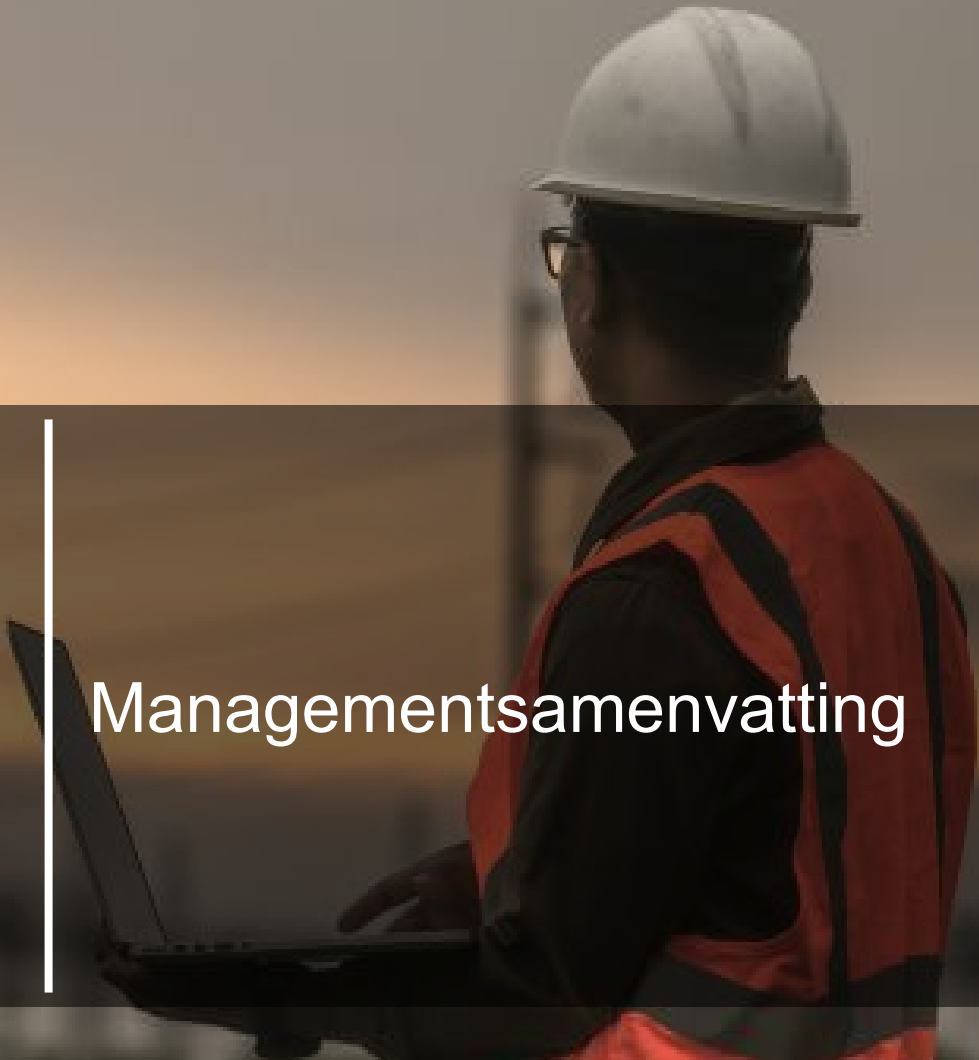
1. **Optieanalyse:** Beoordeling van projectstructuren en financieringsmodellen voor kernenergieprojecten.
2. **Afwegingskader:** Ontwikkeling van een kader waarmee verschillende opties voor het GSP kunnen worden geëvalueerd en vergeleken.
3. **Strategische ondersteuning:** Strategisch advies ter ondersteuning van interdepartementale besluitvorming.
4. **Modellering:** Ontwikkeling van twee financiële modellen: één voor de financiële analyse op projectniveau en één voor het inzichtelijk maken van de impact op de overheidsbegroting.
5. **Ondersteuning bij staatssteunprocedures**
 - Gedurende het traject heeft KPMG regelmatig workshops georganiseerd ter ondersteuning van afstemming met en tussen stakeholders, bewaking van de voortgang en documentatie van tussentijdse keuzes.
 - KPMG acht het toepassen van *lessons learned* uit vergelijkbare internationale projecten van belang. Daarom is in dit traject gebruik gemaakt van de expertise binnen het bredere KPMG-netwerk op gebied van kernenergieprojecten. Daarnaast heeft Etara aanvullende ondersteuning geboden, gebaseerd op hun diepgaande kennis van nucleaire-ontwikkelingen in Europa, onder meer via deelname aan workshops en inhoudelijke reviews van dit rapport.

De opdracht van KPMG is beperkt tot het verstrekken van advies met betrekking tot de ontwikkeling van een voorkeurs GSP

- De verantwoordelijkheid voor het delivery model ligt bij KGG en valt expliciet buiten de scope van KPMG. KPMG merkt op dat de keuze voor een Delivery Model invloed kan hebben op het risicoprofiel van de financieringsstructuur (zowel via vreemd- als eigen vermogen) en dat dit zorgvuldig dient te worden beoordeeld.
- De aannames en uitgangspunten in dit Rapport zijn gebaseerd op internationale vergelijkbare projecten en KPMG's expertise. Deze aannames en uitgangspunten dienen nader gevalideerd te worden op basis de uitwerking van het project en een proces van market sounding, met als doel aannames te verfijnen naar de Nederlandse context en 'investor appetite' te toetsen.

Hoofdstuk

Managementsamenvatting

A person wearing a white hard hat and a high-visibility orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn, with warm orange and yellow light from the sky.

Managementsamenvatting

Het Government Support Package voor de ontwikkeling van kerncentrales in Nederland

Introductie van een Government Support Package

- Deze managementsamenvatting geeft een overzicht van het doorlopen proces, bevindingen en aanbevelingen met betrekking tot de bepaling van een GSP. De managementsummary volgt de opbouw zoals opgenomen in de leeswijzer hieronder.
- **Context van dit rapport:** KGG, ondersteund door KPMG en Etara, heeft een voorkeurs-GSP ontwikkeld ter ondersteuning van het Nederlandse nucleaire nieuwbouwprogramma. Dit volgt op uitgebreide haalbaarheidsstudies, marktconsultaties en de keuze van KKG voor het oprichten van NEO NL (Nucleaire Energie Organisatie Nederland, de SOE die verantwoordelijk wordt voor de projectuitvoering).
- **Afwegingskader:** Om de projectstructuur te beoordelen, biedt dit Rapport een gestructureerd afwegingskader waarmee financierings- en inkomstenmodellen kunnen worden beoordeeld op vijf criteria: betaalbaarheid, haalbaarheid, impact op schuld en saldo, Staatscontrole en risicodeling. Verder wordt er aan twee aanvullende randvoorwaarden getoetst: EC-goedkeuring en marktvertrouwen.
- **Optieanalyse:** Dit Rapport bevat inzichten in verschillende financieringsmodellen, zoals publieke en private varianten, en verschillende inkomstenmodellen, zoals RAB, CfD en PPA's.
- **Lessons Learned EU-voorbeelden:** Het Rapport bevat inzichten uit staatssteunbeoordelingen van vergelijkbare nucleaire projecten door de Europese Commissie (EC). Deze voorbeelden onderstrepen het belang van proportionaliteit van de steun en het minimaliseren van marktverstoring.
- **Scenario-analyse:** Drie scenario's zijn geanalyseerd: (I) volledig publieke financiering; (II) Publiek + ECA's; en (III) Publiek + ECA's + Privaat (gedefinieerd als Senior Debt). Gevoeligheidsanalyses onderstrepen de sensitiviteit van de parameters (zoals LCOE en CfD) voor veranderingen in de aannames van de Businesscase.
- **Beoordeelde steunmaatregelen:** Drie maatregelen zijn geëvalueerd: (I) Staatsfinanciering; (II) een CfD; en (III) Staatsgaranties.
- **Aanbeveling:** Op basis van de totale beoordeling adviseren wij het project te starten met volledige publieke financiering in combinatie met een CfD, om betaalbaarheid en continuïteit van de onderneming te waarborgen. De projectstructuur dient dusdanig te worden vormgegeven dat in de toekomst private kapitaalparticipatie mogelijk is.

Context van
dit rapport

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..... Afwegingskader



Optieanalyse

.....



..... Lessons Learned
uit EU-voorbeelden



Scenario-
analyse

.....



..... Beoordeelde GSP-
maatregelen en
aanbeveling



Risico's bij de ontwikkeling van kerncentrales vereisen een goed gedefinieerd Government Support Package

Overwegingen voor een GSP bij de ontwikkeling van kernenergie

- Betrokkenheid van de Staat is essentieel tijdens de ontwikkeling- en bouwfase van kerncentrales. Recente initiatieven in Europa, zoals PAKS II (Hongarije), Dukovany 5 (Tsjechië), Lubiatowo-Kopalino (Polen), en Hinkley Point C en Sizewell C (VK), tonen het cruciale belang van staatssteun in een vroeg stadium voor de levensvatbaarheid en voortgang van de projecten.
- Risicofactoren in de eerste fases van nucleaire nieuwbouwprojecten ontmoedigen private investeringen. Deze risico's omvatten:
 - **Politieke- en regulatoire risico's:** Veranderingen in politiek landschap, wet- en regelgeving vormen een aanzienlijk risico dat de haalbaarheid of winstgevendheid van het project kan beïnvloeden. Deze risico's worden versterkt door de lange tijdslijnen van het project.
 - **Onzekerheid van langetermijninkomsten:** Kernenergieprojecten zijn inherent onzeker door hun lange operationele levensduur. Deze onzekerheid wordt versterkt door schommelingen in energieprijzen over tijd. De totale periode en onzekerheid vermindert het vertrouwen van investeerders en bemoeilijkt het opstellen van betrouwbare prognoses.
 - **Technologierisico's:** Hoewel de technologie elders is bewezen, brengt het project implementatierisico's met zich mee omdat in Nederland al lange tijd geen vergelijkbaar project is gerealiseerd. Deze "first-of-a-kind"-status vergroot het risico op onzekerheden in Capex en mogelijke kostenoverschrijdingen.
 - **Kapitaalintensiteit, financiële concentratierisico's en complexiteit:** Het project vereist aanzienlijke initiële investeringen met een hoog bouwrisico door de complexiteit. Dit vergroot de risico's voor private partijen en leidt tot concentratierisico's op de balansen van financiers. Het mitigeren van deze risico's vereist een consortium van meerdere private partijen, wat de financiële structuur van het project complexer maakt.
- Door het risicoprofiel van het project is private financiering in de beginfase beperkt beschikbaar en kostbaar. Het GSP is ontworpen om deze uitdagingen te adresseren via een samenhangend pakket aan maatregelen.

KGG heeft zich ten doel gesteld een voorkeursfinancieringsstructuur en GSP vast te stellen en laat zich hierbij ondersteunen door KPMG en Etera

- KGG is momenteel bezig met de voorbereidende fase van het Nederlandse nucleaire nieuwbouwprogramma. In de afgelopen jaren zijn belangrijke mijlpalen bereikt, waaronder de voltooiing van technische haalbaarheidsstudies, uitgebreide marktconsultaties en de planning voor de (toekomstige) oprichting van Nucleaire Energie Organisatie Nederland (NEO NL), de staatsdeelneming die belast zal worden met de technologieselectie, de ontwikkeling, de constructie, de exploitatie en de ontmanteling van de centrales.
- In de afgelopen maanden heeft KGG zich gericht op de ontwikkeling van een alomvattend GSP om de rol van de Staat bij het bevorderen van het nucleaire nieuwbouwprogramma te definiëren. Deze inspanningen hebben de eerste contouren van het GSP gevormd dat de komende maanden verder zal worden verfijnd door middel van een dialoog met belanghebbenden; onder meer met de EC voor een staatssteuntoets, en zal worden afgestemd op het governance- en delivery model.
- Zoals uiteengezet in het hoofdstuk "*Nuclear Power Plant Project Models*" en de beoordeelde case studies, zijn er tal van mogelijke combinaties van financierings-, inkomsten- en delivery modellen. Elke configuratie van opties heeft zijn eigen voor- en nadelen en specifieke vereisten met betrekking tot de noodzakelijke GSP.
- Bovendien zijn sommige projectmodellen inherent verbonden met een GSP-maatregel. Zo kan de financiering van de kerncentrale via staatsschuld tegen lage rentetarieven zowel een financieringsmodel (als de eigenaar de Staat is) als een GSP-maatregel zijn.
- Er is een voorkeursmodel ontwikkeld voor de financieringsstructuur van de kerncentrale, inclusief een voorkeurs GSP-pakket.
- In een reeks workshops zijn de opties, bijbehorende afwegingen en staatssteuncompatibiliteit besproken. Ter ondersteuning van de modelkeuze is een afwegingskader opgesteld, gericht op de belangrijkste parameters ("*Integrated Decision-Making framework*").
- Daarnaast is een financieel model ontwikkeld om kwantitatief inzicht te geven in de Businesscase in verschillende scenario's, inclusief de bijbehorende GSP-vereisten.

De verschillende financierings- en inkomstenmodellen zijn beoordeeld op basis van het afwegingskader

De volgende criteria van het afwegingskader dienen als leidraad voor de beoordeling van de verschillende projectmodellen

Afwegingskader	
Criteria	Beschrijving
Impact op schuld en saldo	De impact op de schuld en het saldo van de Staat tijdens de bouw- en exploitatiefase. Dit omvat zowel de impact uit hoofde van het financierings- als het inkomstenmodel bij het ondersteunen van respectievelijk de noodzakelijke investerings- en exploitatiefase.
Betaalbaarheid	Betaalbaarheid heeft betrekking op de absolute kosten van het project. Dit wordt gemeten op basis van de LCOE.
Haalbaarheid	Haalbaarheid en tijdigheid van financiering, inclusief schaalbaarheid voor toekomstige centrales.
Staatscontrole	De mate van flexibiliteit waarmee de Staat de besluitvorming in de leverende entiteit kan controleren en kan reageren op veranderingen in politieke voorkeuren. Het gaat hierbij om het in kaart brengen van de relevante stakeholders, zoals ministeries, private investeerders en operationele bedrijven, en het gaat om de verdeling van zeggenschap en de beslissingsbevoegdheid.
Risicodeling	De financiële risico's kunnen worden verdeeld tussen de Staat, (particuliere) investeerders en de technologie leverancier. Het gaat hierbij met name om de bouw- en inkomstenrisico's, en de mogelijke afwijkingen van de voor de Staat te verwachten budgetreeks, en hoe deze zoveel mogelijk kunnen worden geminimaliseerd.
Randvoorwaarden^(a)	EC-goedkeuring en marktvertrouwen

Noot: (a) Het afwegingskader bestaat uit twee randvoorwaarden waaraan voldaan moet worden: (1) EC-goedkeuring; en (2) marktvertrouwen. Dit zijn uitgangspunten die niet leiden tot keuzes tussen de verschillende projectstructuren en GSP-opties

De verschillende projectmodellen (opties van inkomsten- en financieringsmodel) zijn beoordeeld langs de as van het afwegingskader

- Het afwegingskader bestaat uit vijf criteria en twee randvoorwaarden.
 - De criteria worden gedefinieerd als de principes aan de hand waarvan de verschillende kernenergieproject- en GSP-opties kunnen worden geëvalueerd. Ze worden gebruikt om de geschiktheid van de opties voor de voorkeur van de Staat te meten, te vergelijken en te bepalen.
 - De randvoorwaarden daarentegen zijn voorwaarden of vereisten waaraan moet worden voldaan. Dit zijn uitgangspunten die niet leiden tot keuzes tussen de verschillende project- en GSP-opties, anders dan het bepalen of een pakket acceptabel is of niet.

De beoordeling van de financieringsmodellen heeft ertoe geleid dat bepaalde opties zijn uitgesloten, terwijl andere opties verdere analyse langs de as van het afwegingskader behoeven

- KPMG heeft de volgende financieringsmodellen beoordeeld, zijnde publiek, ECA, privaat, technologieleverancier en 'Owner-led' (subsectie: *'Financing Models'*).
- 'Owner-led financing' (door bijvoorbeeld een grote energie producent) is niet waarschijnlijk in de Nederlandse context. Financiering door technologie leveranciers (Vendor financing) is beperkt door verminderde beschikbaarheid van vendor kapitaal.
- Verdere beoordeling tussen publiek-, ECA- en private financiering vereist een beoordeling langs de as van het afwegingskader, zoals verder wordt toegelicht op de volgende pagina's.

De inkomstenmodellen zijn geëvalueerd aan de hand van het afwegingskader, wat heeft geresulteerd in de selectie van een voorkeursmodel op basis van de beoordeelde criteria

- KPMG beoordeelde de volgende inkomstenmodellen: RAB, PPA en CfD (subsectie: *'Revenue Models'*).
- Modellen zoals in het Mankala-project zijn als niet toepasbaar beschouwd in de Nederlandse context en niet levensvatbaar vanwege het ontbreken van een markt voor grote afnemers. Als gevolg hiervan is dit model niet beoordeeld.
- De overige modellen, zoals RAB, CfD en PPA, zijn op de volgende pagina's verder beoordeeld langs de as van het afwegingskader.

Betaalbaarheid is de belangrijkste parameter die publieke en private financiering onderscheidt

Afwegingskader

- Voor het financieringsmodel van het project zijn verschillende scenario's (publiek en privaat) geëvalueerd langs de as van het afwegingskader (subsectie: 'financing models'). In de tabel aan de rechterkant wordt onder private financiering verwezen naar zowel ECA's als wel het verstrekken van een Senior Debt faciliteit door overige private financiers.
- Impact op schuld en saldo: De budgettaire impact van private financiering hangt af van de structurering van benodigde staatsgaranties. Aangezien een beperkte risico-overdracht naar private kapitaalverschaffers verwacht wordt (als gevolg van vergaande staatsgaranties), is verondersteld dat garanties mogelijk EMU-schuld relevant zijn. ^(a) De precieze impact van het aantrekken van private financiering op de begroting van de Staat dient nader te worden onderzocht. Hierdoor is dit criteria op dit moment nog geen onderscheiden factor in de structurering.
- **Betaalbaarheid (LCOE):** Dit is de **meest onderscheidende parameter**. Verschillen in kapitaalkosten tussen publieke- en private financiering, als gevolg van lagere rente en rendementsvereisten voor respectievelijk publieke financiering en eigen vermogen, resulteren consequent in een lagere LCOE ten opzichte van private financiering. KGG heeft aangegeven betaalbaarheid een belangrijk criterium te vinden in de afweging.
- **Haalbaarheid:** Dit criterium heeft ertoe bijgedragen dat onhaalbare opties, zoals volledige private financiering vanaf het begin, zijn uitgesloten. Andere scenario's zijn ontwikkeld, variërend van volledige publiek tot combinaties van publieke- en private financieringen. Deze combinaties worden haalbaar geacht, mits er een door de markt geaccepteerde GSP beschikbaar is.
- **Staatscontrole:** De Staat behoudt vóór COD strategische controle via een volledig- of meerderheidsbelang, waardoor deze parameter geen onderscheid maakt tussen de verschillende financieringsopties.
- **Risicodeling:** Private financiering vereist doorgaans vergaande staatsgaranties, waardoor risico-overdracht via het financieringsmodel waarschijnlijk beperkt is en deze parameter geen onderscheid maakt. Risicodeling kan via het delivery-model mogelijk worden gerealiseerd.

Beoordeling van private- en publieke financiering via het afwegingskader		
Criteria	Private financiering	Publieke financiering
Impact op schuld en saldo	Private financiering kan EMU-impact verlagen bij voldoende risico-overdracht, maar staatsgaranties beperken dit naar verwachting. Vereist nadere beoordeling.	Effect op EMU-schuld en -saldo hangt af van type publieke financiering. Financiering via schuld heeft mogelijk minder impact dan eigen vermogen stortingen. Vereist nadere beoordeling.
Betaalbaarheid	Hogere kosten door rente en vereist rendement. Lange bouwfase verhoogt gekapitaliseerde rente. ECA's zijn goedkoper dan private financiering (senior debt), maar duurder dan publieke financiering.	Lagere financieringskosten door kredietwaardigheid van de overheid.
Haalbaarheid	Private financiering vanaf de start is onrealistisch door hoog risico, maar wellicht mogelijk met vergaande garanties. In later stadium kan wellicht wel private financiering aangetrokken worden. ECA's zijn eerder beschikbaar dan andere private financiering	Overheidsfinanciering is volledig haalbaar in alle beoordeelde scenario's.
Staatscontrole	De Staat blijft in alle realistische scenario's meerderheid/volledig eigenaar, zelfs met betrokkenheid van private financiering.	De Staat blijft in alle realistische scenario's meerderheid/volledig eigenaar, zelfs met betrokkenheid van private financiering.
Risicodeling	Private financiering vereist uitgebreide staatsgaranties, vooral tijdens de ontwikkeling en de bouw.	De Staat draagt de meeste risico's in de vroege fasen. Risicodeling mogelijk via delivery model.

Noot: (a) De EMU-impact van eigen vermogen stortingen, leningen en garanties hangt af van de manier waarop ze zijn gestructureerd, met name of ze kwalificeren als financiële transacties en de waarschijnlijkheid van terugbetaling of inwerkingtreding van garanties.

Haalbaarheid is de belangrijkste parameter voor het onderscheid tussen de inkomstenmodellen

Afwegingskader (vervolg)

- Voor het inkomstenmodel van het project zijn RAB, CfD en PPA's geëvalueerd (subsectie: 'Revenue Models') langs de as van het afwegingskader. Van de criteria in het afwegingskader is de haalbaarheid het meest doorslaggevend gebleken.
 - **Impact op de schuld en het saldo:** Het RAB-model biedt inkomsten tijdens de bouw en verlaagt de behoefte voor financiering tijdens de bouw doordat gekapitaliseerde rente beperkt wordt. CfD en PPA genereren geen inkomsten tijdens de bouw, wat de budgettaire blootstelling vergroot.
 - **Betaalbaarheid (LCOE):** Het RAB-model verlaagt de LCOE door het effect van gekapitaliseerde rente te beperken. CfD en PPA verlagen de financieringskosten indirect door inkomstenzekerheid in de operationele fase.
 - **Haalbaarheid:** Is de meest **doorslaggevende en onderscheidende parameter**.
 - Het RAB-model wordt onhaalbaar geacht in het korte tijdsbestek dat de Staat voor ogen heeft vanwege het gebrek aan een wetgevend kader voor de toepassing van een RAB-model voor kernenergie.
 - Een CfD kent minder implementatie-uitdagingen op basis van een gevestigde *track record* in vergelijkbare Europese projecten. Tevens is het model schaalbaar voor het incorporeren van mogelijke PPA contracten. Tevens geldt dit als de voorkeursoptie.
 - Nucleaire-energie leent zich goed voor langlopende PPA's. Door de lange ontwikkel- en bouwtijd (10+ jaar) worden PPA's dichter bij het moment van oplevering door meer zekerheid ten aanzien van marktprijzen
 - **Staatscontrole:** Niet toepasbaar, omdat geen significant verschil in controle van de Staat is geïdentificeerd tussen de drie inkomstenmodellen.
 - **Risicodeling:** RAB deelt risico met consumenten, maar kan de prikkels voor kostenbeheersing verminderen (moral hazard, subsectie: 'Option Analysis').
- De beoordeling van de inkomstenmodellen langs het afwegingskader heeft geleid tot de voorkeur voor een CfD-model, dat goed aansluit bij het Nederlandse- en Europees-regelgevend kader. Bovendien stabiliseert het effectief de operationele inkomsten en vermindert het investeringsrisico.

Beoordeling van de inkomstenmodellen via het afwegingskader			
Criteria	RAB	CfD	PPA
Impact op schuld en saldo	Beperkt omdat het voornamelijk afhankelijk is van financiering via consumenten ¹ . Inkomsten (tijdens de bouw) verlagen de behoefte aan steun vanuit de Staat.	Waarschijnlijke impact op de rijksbegroting, afhankelijk van markt- en referentie prijs van de CfD ("Strike Price"). Geen inkomsten tijdens de bouw.	Hangt af van de structuur (commercieel versus een PPA van de overheid). Geen inkomsten beschikbaar tijdens de bouw.
Betaalbaarheid	Beperkt de gekapitaliseerde rente (en dus de kapitaalkosten). Verlagende impact op LCOE.	Heeft geen directe invloed op LCOE. Indirecte impact door het verminderen van het inkomstenrisico voor kapitaalverschaffers.	Heeft geen directe invloed op LCOE. Indirecte impact door het verminderen van marktrisico voor kapitaalverschaffers.
Haalbaarheid	Geen nucleair precedent in NL of EU. Vereist een complex en tijdrovend proces voor de ontwikkeling van regelgeving.	Voorkeursmethode van de EC, met beperkte wetswijzigingen. Kan worden toegepast zonder volledig raamwerk vóór de bouw.	Vereist grote, kredietwaardige afnemers. Minder regeldruk dan RAB, maar complexer dan CfD door het aantal PPA's.
Staatscontrole	Niet van toepassing.	Niet van toepassing.	Niet van toepassing.
Risicodeling	Consumenten delen mee in kostenoverschrijdingen.	Bouwrisk ligt bij investeerders, CfD biedt steun tijdens operationele fase.	Afhankelijk van contractstructuur.

Noot (1) Waarbij deze consumentenbijdrage niet als belasting geclassificeerd is. Dit heeft KPMG niet nader onderzocht.

Overwegingen inzake staatssteun: lessen uit andere Europese nucleaire projecten (1/2)

De GSP-maatregelen vallen onder de staatssteunbeoordeling van de Europese Commissie (EC), waarbij eerdere kernenergieprojecten waardevolle lessen hebben opgeleverd

- De GSP-maatregelen moeten in overeenstemming zijn met de staatssteunregels van de EC op grond van artikel 107, lid 3, (c), TFEU. Eerdere processen, zoals Dukovany, Sizewell C, Hinkley Point C, Paks II en Lubiatowo-Kopalino, bieden inzichten met betrekking tot de vier belangrijkste criteria: doelstelling van gemeenschappelijk belang, noodzaak en marktfalen, proportionaliteit en het minimaliseren van marktverstoring.
- De eerste twee criteria van artikel 107, lid 3, onder c), zijn doorgaans goed ingeburgerd en aanvaard door de Commissie. Uit de case studies blijkt dat de EC bijzondere nadruk legt op het bewijsmateriaal ter ondersteuning van de **proportionaliteit van de steun** en de maatregelen die zijn genomen om **markt- en concurrentievervalsingen tot een minimum te beperken**.

1. Doelstelling van gemeenschappelijk belang

Nucleaire projecten dragen bij aan EU-doelstellingen zoals energiezekerheid, decarbonisatie en diversificatie, in overeenstemming met strategieën zoals REPowerEU.

2. Noodzaak en marktfalen

De EC erkent dat nucleaire projecten te maken hebben met unieke financieringsbelemmeringen, hoge kapitaalbehoeften, lange doorlooptijd en regelgevingsrisico's die staatssteun rechtvaardigen via mechanismen zoals CfD's, schuld- en eigen vermogen injecties en garanties. Precedenten wijzen erop dat verschillende en op maat gemaakte benaderingen in verschillende projecten in staat zijn om hetzelfde marktfalen te beperken.

De GSP-maatregelen vallen onder de staatssteunbeoordeling van de Europese Commissie (EC), waarbij eerdere kernenergieprojecten waardevolle lessen hebben opgeleverd (vervolg)

3. Proportionaliteit van de steun

De EC ziet erop toe dat de steun beperkt blijft tot wat nodig is om de financieringskloof te dichten en dat overcompensatie van de begunstigden wordt vermeden, maar houdt bij haar afweging wel rekening met positieve externe effecten. De EC maakt gebruik van analyses van financiële modellen om scenario's te beoordelen en kan wijzigingen in de steunvoorwaarden opleggen als onderdeel van haar goedkeuringsproces:

- Hinkley Point C: Uitbreiding van winstdeling en verhoogde garantievergoedingen.
- Dukovany: Verkorte CfD-duur en terugvorderingsbepalingen.
- Paks II: Volledige overheidsfinanciering met winst-rendementsvoorwaarden.
- Lubiatowo-Kopalino (nog geen besluit): EC uitte zorgen over (mogelijke) buitensporige steun en brede garanties.

4. Minimaliseren van marktverstoring

De EC vereist juridische en operationele scheiding van bestaande exploitanten, transparante handelsstrategieën en niet-discriminerende veilingen ter voorkoming van marktmanipulatie en ter bescherming van de mededinging.

Overwegingen inzake staatssteun: lessen uit andere Europese nucleaire projecten (2/2)

Lessen die kunnen worden getrokken uit de EU-staatssteunbeoordelingen voor kernenergieprojecten

- Hinkley Point C: Handelstransparantie en gescheiden boekhouding.
- Dukovany: Onafhankelijk bestuur en verplichte afzet in de markt.
- Paks II: Structurele scheiding en gereguleerde handelsvolumes.
- Voortbouwend op deze inzichten komen een aantal belangrijke lessen naar voren uit het onderzoek van de EC naar recente staatssteunzaken, met name op het gebied van proportionaliteit en marktverstoring.
 - Ten eerste legt de EC sterk de nadruk op het vermijden van overcompensatie, vooral als er privaat kapitaal bij betrokken is^(a). Mechanismen zoals terugvorderingen, maximale rendementen en winstdeling op eigen vermogen zijn essentieel om ervoor te zorgen dat overheidssteun niet leidt tot niet-marktconforme rendementen.
 - Ten tweede dient de handelsstrategie van de kerncentrale zo zijn ontworpen dat de transparantie en liquiditeit van de markt worden ondersteund, terwijl de verdringing van hernieuwbare energieopwekking wordt vermeden. Dit wordt doorgaans bereikt door middel van toezeggingen om een aanzienlijk deel van de productie op georganiseerde markten te verkopen en door niet-discriminerende veilingen.
 - Daarnaast is sprake van toegenomen aandacht van de EC op de wisselwerking van het afsluiten van private PPA's op de overeengekomen CfD.
 - Ten slotte besteedt de EC aandacht aan de implicaties van de marktstructuur van de steun. Juridische en operationele scheiding van gevestigde nutsbedrijven, onafhankelijk bestuur en beperkingen op herinvestering of uitbreiding van het project zonder verdere goedkeuring van de EC zijn allemaal van cruciaal belang om de risico's van marktconcentratie en manipulatie te beperken. Deze lessen onderstrepen het belang van het ontwerpen van steunregelingen die niet alleen financieel gerechtvaardigd zijn, maar ook structureel aansluiten bij bredere doelstellingen zoals marktintegriteit en klimaat neutraliteit.

Noot: (a) Privaat kapitaal omvat schuld en eigen vermogen.

Drie geïdentificeerde scenario's zijn beoordeeld door middel van financiële analyse

Scenario-analyse

- Om de Businesscase en mogelijke financieringsscenario's te beoordelen, heeft KPMG drie scenario's geanalyseerd (Subsectie: 'Scenario analysis'):
 - **Scenario I (volledig publiek scenario)**, gaat uit van een volledig publieke kapitaalstructuur tot aan ingebruikname (COD). Hierbij wordt gestreefd naar 1) een kapitaalstructuur waarbij de schuld wordt gemaximaliseerd 2) de 'Strike Price' van de CFD zo laag als mogelijk te zetten en 3) continuïteit van de onderneming. Gegeven deze uitgangspunten is een optimale kapitaalstructuur ontworpen van 60/40 schuld/eigenvermogen. Publieke financiering gaat uit van 0% rente vóór COD en 3,75% post-COD;
 - **Scenario II (ECA scenario)**, voorziet in private financiering via exportkredietagentschappen, gedefinieerd als ECA's. Het uitgangspunt hierbij is dat in totaliteit 5 miljard aan ECA financiering wordt gecommitteerd tegen 5% rente.
 - **Scenario III (ECA + Senior Debt scenario)**, voorziet in private financiering via zowel de ECA's als private financiering in de vorm van Senior Debt. Afgezien van de aannames in scenario II voor de ECA's, wordt aangenomen dat de Senior Debt wordt verstrekt vijf jaar voorafgaand aan COD, voor een totale commitment van EUR 5 miljard aan tegen een rentevoet van 8%. Hierbij wordt aangenomen dat eventuele staatsgaranties eventueel benodigd voor het aantrekken van privaat kapitaal geen aanvullende kosten met zich meebrengen.
- Alle drie de scenario's hebben de volgende aannames gemeen:
 - Bouwkosten (Capex) in reële termen van EUR 30 miljard, rekening houdend met een kerncentrale met twee reactoren van 1.650 MW (op basis van de bovenste bandbreedte van de brief van KGG aan de Tweede Kamer)¹.
 - Constante marktprijs van EUR 75 per MWh (prijsniveau 2025).
 - Beschikbaarheid van 90% en bezettingsgraad van 100% (resultierend in 90% gerealiseerde output).
 - Indexatie van de omzet (marktprijs) en Opex van 2%.

Scenario-analyse (vervolg)

- Alle drie de scenario's hebben de volgende aannames gemeen (vervolg):
 - Voor elk scenario is een CfD vereist (waarbij de waarde nul kan zijn). De CfD is gebaseerd op de totale liquiditeitsbehoefte over elke kalibratieperiode van 5 jaar, waarbij een Strike Price (uitoefenprijs) wordt vastgesteld gebaseerd op de vrije kasstroom beschikbaar voor rente en aflossing.
 - Er wordt niet uitgegaan van een minimumrendement op het eigen vermogen.

Belangrijke beperkingen van de scenario-analyse

- De huidige Businesscase is gebaseerd op publieke informatie die door KPMG is beoordeeld. Er heeft geen beoordeling plaatsgevonden in samenwerking met het KGG team verantwoordelijk voor het Delivery Model. KPMG heeft een Scoping document opgesteld ("20250904 - Project Split - Scoping document") waarin de verschillende parameters, aannames en bronnen zijn beschreven.
- De onderliggende aannames van de Businesscase, zoals Capex, technische- (locatie, technologie), operationele- (beschikbaarheid, bezetting) en marktaannames (elektriciteitsprijzen, inflatie), kennen grote onzekerheden.
- Gezien de inherente onzekerheden in de Businesscase en de aannames over financiering (zoals hoogte (commitment), looptijd en rentetarieven), zijn potentiële kapitaalinvesteringen in eigen vermogen van private partijen of alternatieve herfinancieringsopties op dit moment buiten beschouwing gelaten.
- Veranderingen in aannames (bijvoorbeeld toename in Capex door verbeterde inzichten) hebben een impact op het ingeschatte risico, de geschatte kasstromen en daarmee de kapitaalstructuur en mogelijke steunmechanismen. De huidige ramingen dienen als indicatief te worden beschouwd, waarbij de nadruk ligt op de impact van verschillende aannames, en zijn alleen geschikt voor de beoordeling zoals beschreven. De realisatie, en daaruit volgende financiële resultaten, kunnen aanzienlijk afwijken van de prognoses en aannames.

Bron: (1) Kamerbrief met referentie KGG 97879255 van 16 mei 2025: Voortgangsbrief nieuwbouw kernenergie mei 2025 - Dit weerspiegelt op geen enkele manier enige voorkeuren tussen de twee technologie leveranciers en is uitsluitend bedoeld voor dit document en de financiële analyse die wordt uitgevoerd om de beoordeling van het GSP mogelijk te maken.

De LCOE en mogelijke CfD-ondersteuning zijn sterk afhankelijk van de aannames in de Businesscase (1/2)

Inzichten uit de financiële analyse

- De tabel rechtsboven toont de gevoeligheid van LCOE- en CfD-ondersteuning binnen Scenario I (volledig publiek), in relatie tot veranderingen in kapitaalstructuur en Capex. Daarnaast worden in de tabel de verschillen weergegeven tussen gekapitaliseerde rente, LCOE en benodigde CfD-ondersteuning voor de drie scenario's (I, II en III).
- Kasstromencirculatie:** Veranderingen in de kapitaalstructuur (meer schuld) leiden tot een verhoging van de schuldaflodingsverplichting, en daarmee tot een hogere benodigde CfD-ondersteuning (zijnde de hoogte van de CfD Strike Price en/of duur), zoals weergegeven in punt **1** rechts. Een verhoging van de schuldratio (bijvoorbeeld richting 98/2) vereist aanvullende inkomstenondersteuning (in de vorm van een CfD Strike Price boven de marktprijs). Deze kasstroomcirculatie (CfD-betalingen van de Staat aan de SOE, gevolgd door schuldaflissingen van de SOE aan de Staat) kan vanuit doelmatigheid van overheidsmiddelen, onwenselijk zijn.
- Algemene gevoeligheden:** De Businesscase is gevoelig voor veranderingen in belangrijke parameters, zoals Capex-schattingen, en/of vertragingen in verwachte ontwikkelings- en bouwperiodes. Dit wordt weergegeven in punt **2** waarbij in een volledig publiek gefinancierd scenario (Scenario I) een vertraging van 5 jaar van COD, gecombineerd met een Capex-overschrijding van EUR 10 miljard, de LCOE verhoogt van EUR 81 MWh naar EUR 103 MWh.

Sensitivity analyses						
EUR m and 0% interest pre-COD	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE		
Scenario I (60/40 Debt/Equity)	-	81	0 (0 quarters)	4.5%		
70/30 Debt/Equity	-	83	6 (20 quarters)	4.9%		
98/2 Debt/Equity	-	94	17 (60 quarters)	8.6%		
Scenario I (EUR 30b real Capex, 2% inflation)	-	81	0 (0 quarters)	4.5%		
EUR 10b Capex cost overrun	-	98	8 (40 quarters)	3.5%		
+ 5 year delay	-	103	9 (20 quarters)	3.5%		
Scenario I (Public financing only)	-	81	0 (0 quarters)	4.5%		
Scenario II (Public financing + EUR 5,000m ECA (5%))	1,284	88	17 (40 quarters)	5.0%		
Scenario I + EUR 5,000m SD (8%)	814	90	20 (40 quarters)	4.9%		
Scenario III (Public + ECA + SD)	2,098	98	25 (60 quarters)	5.4%		

Cash flow to the Dutch State						
EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065
Scenario I - Public financing only						
Cash out flow	(39,183)					
Cash in flow		7,901	8,748	9,817	10,761	11,954
Total per period	(39,183)	7,901	8,748	9,817	10,761	11,954
Total cash flow to the Dutch State						9,997
Scenario III - Public + ECA + SD						
Cash out flow	(30,503)	(8,907)	(4,919)	(1,078)	-	-
Cash in flow		8,605	8,247	6,463	7,317	12,262
Total per period	(30,503)	(303)	3,328	5,385	7,317	12,262
Total cash flow to the Dutch State						(2,514)
Delta cash flow pre-COD	8,680					
Delta cash flow post-COD		(8,203)	(5,420)	(4,432)	(3,444)	307
Sum delta pre-COD	8,680					
Sum delta post-COD	(21,191)					
Net timing effect	(12,511)					

De LCOE en mogelijke CfD-ondersteuning zijn sterk afhankelijk van de aannames in de Businesscase (2/2)

Inzichten uit de financiële analyse (vervolg)

- **Gekapitaliseerde rente:** Tijdens de bouwfase wordt rente gekapitaliseerd bovenop de uitstaande schuld, vanwege het ontbreken van inkomsten om rentebetalingen te dekken. Dit vergroot de totale schuldpositie en toekomstige rentelasten. In scenario III (met ECA's en Senior Debt), zoals weergegeven in punt 3 rechts, leidt dit tot een toename van de totale schuldpositie met EUR 2,1 miljard ten opzichte van scenario I.
- **Timing van overheidssteun:** Minder publieke financiering in de pre-operationele fase leidt tot een hogere benodigde steun tijdens de operationele fase, zoals geïllustreerd in punt 4 van de tabel rechts bij de vergelijking tussen scenario I (volledig publiek gefinancierd) en scenario III (Publiek + ECA's + Senior Debt). Deze afweging wordt geïllustreerd in de tabel: een lager niveau van publieke financiering in scenario III (EUR 8,7 miljard minder pre-COD) resulteert in een lagere kasinstroom post-COD van EUR 21,2 miljard.
- Samenvattend leiden hogere rentetarieven in de pre-COD-fase (lagere staatssteun) tot hogere CfD-betalingen in de post-COD-fase (hogere staatssteun), waarbij de post-COD-steun ook de kosten van de rente op gekapitaliseerde rente draagt

Sensitivity analyses					
EUR m and 0% interest pre-COD	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE	
Scenario I (60/40 Debt/Equity)	-	81	0 (0 quarters)	4.5%	
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Scenario I + EUR 5,000m SD (8%)	814	90	20 (40 quarters)	4.9%	
Scenario III (Public + ECA + SD)	3 2,098	98	25 (60 quarters)	5.4%	

Cash flow to the Dutch State						
EUR m		2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065
	Pre-COD					
Scenario I - Public financing only						
Cash out flow	(39,183)					
Cash in flow		7,901	8,748	9,817	10,761	11,954
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Sum delta pre-COD	4 8,680					
Sum delta post-COD	(21,191)					
Net timing effect						(12,511)

Bij elke financieringsvorm is een combinatie van maatregelen 1, 2 en 3 benodigd (1/3)

Maatregel 1: Publieke financiering draagt bij aan de beleidsdoelstellingen betaalbaarheid

- Publieke financiering, via eigen vermogen en/of schuld, zorgt voor lagere kapitaallasten (in vergelijking met private financiering).
- Uit de scenario-analyse blijken de kapitaallasten een grote impact te hebben op de LCOE en Project IRR. In scenario III neemt de LCOE toe door de toevoeging van ECA's en Senior Debt van EUR 81 MWh naar EUR 98 MWh. Publieke financiering biedt een kosteneffectieve oplossing.
- De totale Capex en de duur van het bouwproject zijn een belangrijke drijver van de LCOE. Sensitiviteitsanalyse op de bouwkosten wijzen uit dat de LCOE substantieel toeneemt bij een scenario met een bouwvertraging van 5 jaar in combinatie met EUR 10 miljard hogere kosten en 2% hogere bouwinflatie, een LCOE van 134 MWh* EUR op.
- Beargumenteerd kan worden dat private financiers kunnen bijdragen door due diligence en projectbeheersing en daarmee mogelijk kostenoverschrijdingen beperken. De subsectie: '*Scenario analysis*' illustreert dat deze toegevoegde waarde (zijnde het beperken van de totale projectkosten) een substantiële bijdrage moet leveren, zijnde EUR 7,8 miljard (Vergelijking tussen Scenario I (volledig publiek) en Scenario III (ECA's + Senior Debt)), om de hogere kapitaalkosten van private financiers te compenseren.
- De Staat heeft de voorkeur uitgesproken voor (gedeeltelijke) Publieke financiering in de vorm van schuldfaciliteit gegeven de contractuele aflossingsverplichting om de (tijds- en periodieke) terugbetaling van het verstrekte kapitaal te formaliseren. KPMG merkt op dat schuldinstrumenten dit voordeel bieden ten opzichte van investeringen via eigen vermogen. Eigen vermogen geeft het recht op dividendbetalingen, wat juridisch gezien een andere zekerheid biedt.
- Gegeven de lange bouwperiode en de kapitalisatie van rente, heeft het aantrekken van private financiering een impact hebben op de LCOE (hogere LCOE). De hoogte van de LCOE een belangrijke overweging van de Staat.

Maatregel 1: Publieke financiering streeft de beleidsdoelstellingen van betaalbaarheid na (Vervolg)

- De LCOE hangt ook bij publieke financiering af van de hoogte van de rente pre-COD. Namelijk de rente wordt:
 - I. Tijdens de bouw betaald, waarvoor aanvullend eigen vermogen nodig is vanwege het ontbreken van inkomsten en dus het genereren van kasstroom in de pre-COD-fase; of
 - II. Gekapitaliseerd, waardoor de totale schuldverplichting toeneemt
- In beide gevallen is aanvullend eigen vermogen van de Staat nodig om de schuldstructuur te ondersteunen. Dit leidt tot een hogere LCOE ondanks dat de staat zowel de verstrekker als de ontvanger is.
- Gegeven bovenstaand kan een schuldinstrument met 0% rente overwogen worden.
- De kapitaalstructuur is afhankelijk van de capaciteit van de SOE om aan haar schuldverplichtingen te voldoen. Een groter aandeel van de schuld in de kapitaalstructuur leidt tot een toename van de rente en aflossingsverplichting.
- Als de kapitaalstructuur wordt geoptimaliseerd op basis van de maximale schuldaflossingscapaciteit (DSCR = 1) kunnen kostenoverschrijdingen een aanzienlijke uitdaging vormen voor de Staat. De financiering van kostenoverschrijdingen door middel van het aantrekken van additionele schuld zal resulteren in een financieringsverplichting waaraan de SOE niet kan voldoen op basis van haar Businesscase.
- De overschrijdingen kunnen worden gedekt door:
 - I. Extra eigen vermogen en/of schuldfinanciering in combinatie met;
 - II. Een verhoging van de inkomstenondersteuning in de vorm van een verhoging van de referentieprijzen van de CfD.
- Samenvattend, het structureren van het project op basis van de maximale schuldaflossingscapaciteit beperkt het vermogen om kostenoverschrijdingen op te vangen, tenzij extra inkomsten worden gegenereerd via de CfD of het tekort wordt gefinancierd door eigen vermogen.

Noot (1) Zie voor de gevoeligheidsanalyses waarin deze analyse is doorgerekend pagina 79 van het volledige (Engelstalige) rapport.

Bij elke financieringsvorm is een combinatie van maatregelen 1, 2 en 3 benodigd (2/3)

Maatregel 2: een mechanisme ter ondersteuning van de inkomsten, in de vorm van een CfD, om op lange termijn zekerheid te bieden over de hoogte van de omzet

- In overeenstemming met de richtlijnen van de EDM van de EC, heeft de Staat de voorkeur om inkomstenondersteuning te bieden via een tweezijdig CfD-mechanisme. De exacte details over de structurering van de CfD zijn afhankelijk van het verder verfijnen van de aannames in de Businesscase en de financiële structurering. De principes die ten grondslag liggen aan de CfD-structuur zijn: i) Looptijd van de CfD; ii) Formule van de Strike Price; iii) Strike Price; iv) Bodem- en plafondmechanismen; v) Stimuleringsmechanismen voor kostenbeheersing en operationele efficiëntie; vi) Mechanismen voor winstdeling.
- Het CfD-model garandeert een vaste prijs voor elektriciteit tijdens de operationele fase van een kerncentrale voor de onderneming, waardoor de onderneming beschermt is tegen marktontwikkelingen. De resulterende inkomstenstabiliteit vermindert het investeringsrisico, waardoor het aannemelijker wordt om private financiering aan te trekken tijdens de bouw- en de operationele fase in combinatie met andere risicobeperkende contracten.
- Op basis van haar beleid verwacht de overheid van een staatsdeelneming een minimumrendement op het eigen vermogen (artikel 5.7.3, '*Nota Deelnemingenbeleid Rijksoverheid 2022*'). Naast de continuïteit van de onderneming kan ook het rendement een rede zijn om de kasstromen te ondersteunen door middel van een CfD, ook als deze volledig door de overheid wordt gefinancierd.
- In de voorgestelde structuur is de Strike Price gebaseerd op de verwachte marktprijs voor elektriciteit van EUR 75 MWh (gebaseerd op informatie van KGG). Gegeven 1) de huidige aannames in de Businesscase, 2) de voorgestelde kapitaalstructuur en financieringsvoorwaarde, is de huidige verwachte marktprijs voldoende ter dekking van de schuldverplichtingen. (De huidige resulterende Strike Price ligt naar verwachting onder of gelijk aan de verwachte marktprijs voor elektriciteit.

Maatregel 2: een mechanisme ter ondersteuning van de inkomsten, in de vorm van een CfD, om op lange termijn zekerheid te bieden over de hoogte van de omzet (vervolg)

- De CfD dient periodiek te worden gekalibreerd om aan te sluiten bij de ontwikkeling van de aannames in de Businesscase. De frequentie van kalibratie dient nader te worden onderzocht.
- De voorgestelde inkomstensteun speelt een belangrijke rol bij de verdeling van risico en rendement dat verschaffers van kapitaal (schuld/eigen vermogen). De CfD beperkt alleen de aanzienlijke marktprijsrisico's tijdens de exploitatie, waarbij andere belangrijke risico's, zoals het risico van niet-voltooiing van het project, geconcentreerd zijn in de ontwikkelings- en bouwfasen.

Bij elke financieringsvorm is een combinatie van maatregelen 1, 2 en 3 benodigd (3/3)

Maatregel 3: Staatsgarantie / Bescherming tegen wetswijziging

- Voor de ontmanteling van de kerncentrale verplicht de ANVS bij wet¹ dat de exploitanten van nucleaire installaties een volledig gefinancierd ontmantelingsplan hebben op het moment dat de installatie operationeel wordt.
- Het financieren van deze verplichting is kostbaar gegeven het feit dat financiële middelen aangehouden dienen te worden waarbij deze een zeer beperkt rendement kunnen genereren.
- De intentie van de wet is zorg te dragen dat private partijen voldoende middelen reserveren om ook ontmanteling van de reactor te kunnen bekostigen.
- Gegeven de Staat volledig eigenaar is van de SOE, leidt deze wettelijke verplichting tot het aanhouden van significante hoeveelheid publieke middelen, die niet doelmatig kunnen worden ingezet.
- Om zowel te kunnen voldoen aan de wet, als zorg te dragen voor een effectieve aanwending van publieke middelen kan het afgeven van een staatsgarantie aan de SOE ter waarborging van de financiering van de ontmanteling van de nucleaire installaties een mogelijke oplossing bieden.
- De Staat streeft ernaar een garantie (tegen een premie) te verstrekken. De inzet van een garantie-instrument is op dit moment nog onzeker, aangezien de besprekingen met de betrokken ministeries nog gaande zijn en nog niet zijn afgerond.
- Gegeven de intentie om privaat kapitaal aan te trekken in een latere fase (met name pre-COD), kan het mogelijk noodzakelijk zijn om vanuit de Staat garanties af te geven ten aanzien van onder andere voltooiing en wetswijzigingen en politieke risico's. Deze instrumenten zijn bedoeld om het ingeschatte risico voor privaat kapitaal, met name in de pre-operationele fase, te beperken.

Maatregel 3: Staatsgarantie / Bescherming tegen wetswijziging (vervolg)

- Specifieke garanties zijn op dit moment nog niet verder beoordeeld, gegeven het gaat om specifieke afspraken die vaak het resultaat zijn van onderhandelingen met private kapitaalverschaffers.
- Indien privaat kapitaal wordt aangetrokken kan mogelijk de steun in de vorm van publieke financiering (maatregel 1) afnemen. Waarbij mogelijk de omvang van garanties toeneemt (maatregel 3) indien privaat financiers dit vereisen.
- Of een maatregel, zoals: (i) een investering in het eigen vermogen; (ii) een lening; en (iii) een garantie, gevolgen heeft voor de schuld en het saldo van de Staat is afhankelijk van de behandeling in het kader van de Economische Monetaire Unie (EMU)^(a). Het positieve effect van het aantrekken van privaat kapitaal op de EMU schuldpositie en het saldo hangt af van de structurering van garanties en de budgettaire verwerking.

Noot: (a) Het EMU-saldo (overheidstekort) en de EMU-schuld (overheidsschuld) zijn belangrijke indicatoren die door de EU worden gebruikt om de fiscale gezondheid van haar lidstaten te monitoren. Het stabiliteits- en groeipact stelt grenzen aan 3% van het bbp voor het jaarlijkse overheidstekort en 60% van het bbp voor de totale overheidsschuld.

Bron: (1) Artikel 15f van de Kernenergiewet: Staatscourant. 2011, 4386 artikel 15f.

KPMG adviseert een flexibele structuur die private financiering niet uitsluit en aansluit bij KGG's betaalbaarheidsdoel (1/2)

Beginfase – volledige publieke financiering

- KPMG komt tot de conclusie dat, gebaseerd op de analyse van financieringsmodellen, projectrisico's, staatssteunprecedenten en het afwegingskader, een volledig publieke financiering in de begin fase van het project de voorkeur heeft.
- Deze conclusie wordt ondersteund doordat in het afwegingskader, betaalbaarheid (in termen van LCOE) als het meest doorslaggevend criterium is gedefinieerd. Publieke financiering levert de laagste LCOE op als gevolg van de gunstige kapitaalkosten van de Nederlandse Staat, en vormt daarmee de meest kosteneffectieve keuze voor de beginfase.
- In een volledig publiek gefinancierd scenario worden naar verwachting de volgende drie belangrijke maatregelen geïmplementeerd:
 - **Maatregel 1 – Publieke financiering:** De Staat verstrekt volledige publieke financiering waarbij een aanvullende inkomenssteun (in de vorm van een Strike Price boven de marktprijs) zoveel als mogelijk wordt vermeden.
 - Deze structuur kent de volgende eigenschappen.
 - een rentepercentage van 0% op publieke schuld vóór COD en 3,75% na COD.
 - De schuld/eigen vermogen-verhouding wordt gemaximaliseerd, wat resulteert in een schuld/eigen vermogen-verhouding van 60/40.
 - De huidige voorgestelde kapitaalstructuur zal herijkt worden naarmate de Businesscase zich ontwikkelt om te waarborgen dat de SOE voldoet aan de continuïteitsvereisten. Dit betekent dat aan alle verplichtingen kan worden voldaan, zoals rente en aflossing, uit energieproductie met of zonder CfD.
 - De aanvaardbaarheid van een pre-COD-rente van 0%, in het kader van de goedkeuring van staatssteun door de EC blijft onzeker met slechts één precedent. De veronderstelde RoE kan eveneens ontoereikend zijn, en beide elementen dienen te worden bevestigd door middel van gesprekken met de EC

Beginfase – volledige publieke financiering (vervolg)

- **Maatregel 2 – Ondersteuning van inkomsten via CfD:** KPMG adviseert om een tweezijdig CFD mechanisme te ontwerpen ter afdekking van het marktrisico op de ontwikkeling van de elektriciteitsprijzen om daarmee de continuïteit van de onderneming te ondersteunen.
- De CfD is gebaseerd op de totale liquiditeitsbehoefte over elke kalibratieperiode van 5 jaar, waarbij een Strike Price (uitoefenprijs) wordt vastgesteld gebaseerd op de vrije kasstroom beschikbaar voor rente en aflossing. De CfD dient niet ter risico afdekking van risico's met operationele en onderhoudskosten.
- Er wordt niet uitgegaan van een minimumrendement op het eigen vermogen op dit moment. De achterliggende rede is het voorkomen kastromen van de Staat naar de private entiteit NEO, die ineffectief zijn.
- Aanvullende ontwerpelementen van de CfD, zoals bodem- en plafondmechanismen, winstdeling en prikkels voor operationele efficiëntie, worden geïmplementeerd om aan te sluiten bij de EU-richtlijnen van het EDM en om proportionaliteit te waarborgen.
- Gegeven de voorgestelde financieringsstructuur en de aannames in de Businesscase is de strike price van de voorgestelde CfD op dit moment gelijk aan de verwachte marktprijs.
- **Maatregel 3 – Staatsgaranties:** KPMG adviseert de Staat om een garantie voor het ontmantelingsfonds te geven aan NEO om te voldoen aan de Kernenergiewet. Waarbij door de inzet van de garantie wordt vermeden dat significante hoeveelheden publieke middelen vanaf COD als voorziening moeten worden aangehouden binnen NEO.

KPMG adviseert een flexibele structuur die private financiering niet uitsluit en aansluit bij KGG's betaalbaarheidsdoel (2/2)

Beginfase – volledige publieke financiering (vervolg)

- Gegeven de huidige Businesscase, (financierings)markt condities en gegeven het huidige afwegingskader concludeert KPMG dat volledig publieke financiering in de beginfase het meest optimaal is.
- Om toekomstige marktontwikkelingen en veranderende projectomstandigheden te kunnen faciliteren is het essentieel om flexibiliteit in de financieringsstructuur te behouden.
- De kapitaalstructuur en voorwaarden dienen zo ontworpen te worden dat privaat kapitaal en ECA's in latere fasen niet worden uitgesloten.
- Als private financiering wordt aangetrokken, dienen de drie maatregelen overeenkomstig te worden aangepast:
 - **Maatregel 1 – Publieke financiering:** Het aandeel van de Staat in de financiering neemt af naarmate de ECA's en private financiering wordt gecombineerd. Dit zal naar verwachting leiden tot een stijging van de kapitaalkosten van het project, en daarmee tot een hogere rente- en aflossingsverplichting. Afhankelijk van de omvang en de specifiek afspraken die ECA's en private financiers vereisen blijft de blootstelling aan projectrisico's voor de Staat gelijk.
 - **Maatregel 2 – Aangescherpte CfD:** De CfD Strike Price zal op een hoger niveau moeten worden vastgesteld als gevolg van de stijging van de kapitaalkosten en de hogere vereisten voor de DSCR (boven 1,0).
 - **Maatregel 3 – Uitgebreide garanties:** Naast het ontmantelingsgarantie zullen naar verwachting specifieke garanties moeten worden afgegeven om het risico aanvaardbaar te maken voor private financiers. Of deze garanties en/of voorwaarden van invloed zijn op de EMU-schuld en het EMU-saldo van de Staat dient zorgvuldig te worden beoordeeld op basis van de daadwerkelijke risico-overdracht van de Staat naar private partijen.

Beginfase – volledige publieke financiering (vervolg)

- Concluderend biedt een gefaseerde financieringsstrategie, beginnend met volledige publieke financiering en met ruimte voor toekomstige private participatie, het beste evenwicht tussen betaalbaarheid, strategische controle en flexibiliteit.
- Deze aanpak sluit aan bij de beleidsdoelstellingen van de Nederlandse Staat en zorgt ervoor dat het GSP responsief blijft ten aanzien van toekomstige ontwikkelingen, terwijl de financiële en operationele levensvatbaarheid van de kerncentrale wordt gewaarborgd.



This confidential report (the "Report") was prepared for the Ministry of Climate and Green Growth (the "Client") by KPMG Corporate Finance, part of KPMG Advisory N.V. ("KPMG Corporate Finance") with regard to an assessment of a potential Government Support Package in relation to the Nuclear Newbuild Programme (the "Project"). This Report is exclusively for the benefit of and internal use by the Client and does not carry any right of publication or disclosure to any third party, without our prior written consent. Neither this report nor its content may be used for any other purpose without prior written consent of KPMG Corporate Finance.

This Report is incomplete without reference to and should be viewed solely in conjunction with the oral briefing provided or to be provided by KPMG Corporate Finance.

In preparing this Report, we have relied upon and assumed, without independent verification, the accuracy and completeness of any information available from public sources, third parties and information provided by, or on behalf of, the Client. We do not accept responsibility for such information and, as far as it relates to information provided by the Client, such information remains the responsibility of the management of the Client.

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The work was undertaken and the report was issued on agreed terms of engagement in order that we might state to the Client those matters on which we agreed to report and for no other purpose. The report was not created for, and should not be treated as suitable for, any other purpose.

Project Split

**Full Report
Government Support Package**

6 October 2025

Glossary and abbreviations

ACM	Authority for Consumers and Markets	LOI	Letter of Intent
ADSB	Atradius Dutch State Business	Market price	Wholesale price from the nuclear power plant's perspective
ANVS	Authority for Nuclear Safety and Radiation Protection	MW	Megawatt
Business Case	Project's financial and strategic assumptions	NNBG	Nuclear New Build Generation
Capex	Capital expenditures	NPE	National Energy System Plan
CfD	Contract for Difference	NPP	Nuclear Power Plant
CGN	China General Nuclear Power Group	O&M	Operations and Maintenance
CIRR	Commercial Interest Reference Rate	OECD	Organisation for Economic Co-operation and Development
COD	Commercial Operations Date	OPEX	Operational Expenditures
DMF	Decision-Making Framework	PC	Purchasing Contract
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortisation	PEJ	Polskie Elektrownie Jądrowe sp. z o.o
EC	European Commission	PPA	Power Purchase Agreement
ECA	Export Credit Agency	RAB	Regulated Asset Base
EDC	Export Development Canada	RoE	Return on Equity
EDF	Électricité de France	SACE	Servizi Assicurativi del Commercio Estero
EMU	European Monetary Union	SOE	State-owned enterprise
EPC	Engineer, Procure, Construct	SPV	Special Purpose Vehicle
FC	Financial close	SZC	Sizewell C Limited
FID	Final Investment Decision	TPR	Third-Party Review
Financial Model	Analytical framework for scenario analyses	TVO	Teollisuuden Voima Oyj
FOAK	First-of-a-kind	TWh	Terawatt-hours
GSP	Government Support Package	US EXIM	Export-Import Bank of the United States
HPC	Hinkley Point C	WJZ	Wetgeving en Juridische Zaken
HUPX	Hungarian Power Exchange		
IGA	Intergovernmental Agreement		
IRR	Internal Rate of Return		
KEXIM	Export-Import Bank of Korea		
KGG	Ministry of Climate and Green Growth		
KHNP	Korea Hydro & Nuclear Power		
LCCC	Low Carbon Contracts Company		
LCOE	Levelized Cost of Energy		

KPMG's assignment is to provide advisory services with regards to the development of a preferred GSP

The Ministry of Climate and Green Growth ("KGG") has requested advisory services from KPMG

- KGG requested KPMG and Etara Partners Ltd ("Etara") for guidance on the financing structure and GSP for the construction of two nuclear power plants. Specifically, KGG requested advise on the following topics:
 - **Overall strategic support:** KGG requested KPMG and Etara to provide strategic guidance on the overall structuring of the financing package, drawing lessons from previous nuclear newbuild projects.
 - This included advising on key steps and milestones, analysing the relationship between the financing structure and the technology selection process, conducting ongoing risk assessments, and offering preliminary insights into potential contractual arrangements.
 - KGG requested KPMG and Etara to assist in preparing a decision-making framework ("DMF") that will help the government evaluate and compare different revenue and financing models.
 - **Quantitative assessment of the financing structures at the project level:** KGG requested the development of a financial model ("Financial Model") for the nuclear newbuild project. Based on this model:
 - KPMG carried out scenario analysis and stress tests which can be used in future decision-making processes, including State-aid procedures.
 - KPMG assessed various financing options over time, including refinancing strategies, and provides insights on the benefits and drawbacks of involving private finance.
 - **Quantitative assessment of the financing structures at the government level:** KGG requested analyses on how the different financing structures impact the government.
 - This includes evaluating options such as subsidies, guarantees and direct investments, and assessing their long-term impact on the public budget.

KPMG structured the advisory services in 5 workstreams

1. **Option analysis:** assessment of project and financing structures for NPPs.
 2. **Integrated Decision-Making Framework:** The development of a framework to compare and evaluate GSP options.
 3. **Strategic advisory support:** Strategic advice in interdepartmental discussions
 4. **Modelling:** the development of two models to analyse project finances and government budget impact
 5. **EC State aid assistance:** Provide input for State aid processes.
- KPMG organised regular workshops to align stakeholders, review progress and document key decisions.
 - KPMG acknowledges the importance of incorporating the best practices from similar projects. Accordingly, this project draws from the broader KPMG network's experience with NPP projects. Additionally, Etara has provided advisory support that leveraged on their in-depth knowledge of NPP development in Europe and has provided insights on the best market practices (via their participation in workshops and review of the report).

KPMG's assignment is limited to providing advisory services with regards to the development of a preferred GSP

- The delivery model of the project is the responsibility of KGG. It is explicitly out of scope of KPMG. KPMG notes that the delivery model can have significant impact on the risks of equity and debt providers and should be assessed accordingly.
- Many of the hypotheses presented in this document are based on our experience with comparable projects in the international context and KPMG's expertise. Note that these findings should be further validated. This ongoing process, which is structured as part of the broader project development and market sounding process, will help determine whether the assumptions hold in the Dutch context and whether investor preferences have evolved.



Chapter

Management Summary

Introduction

Precedent NPP models used in Europe

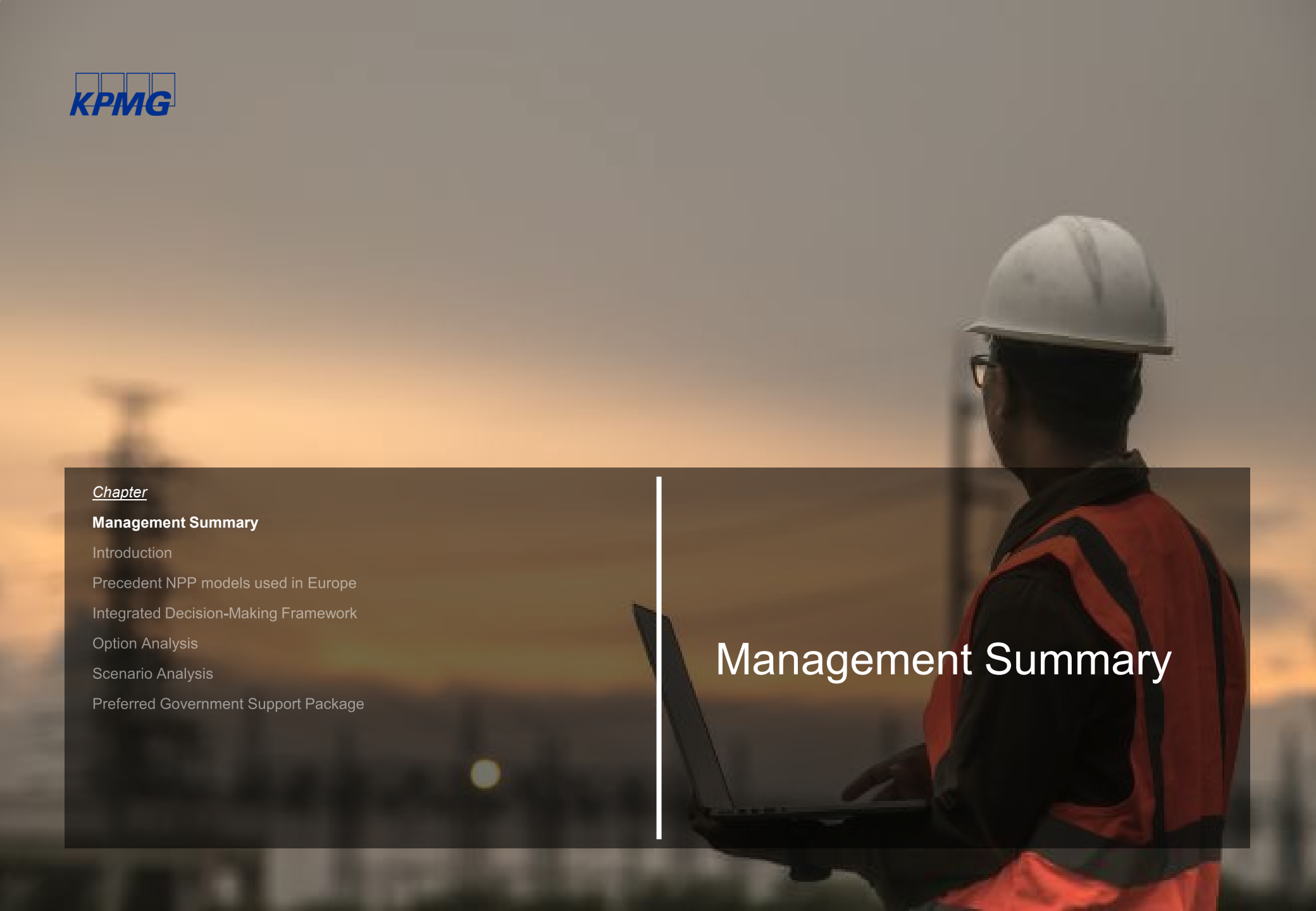
Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

Management Summary

The background of the slide is a photograph of a construction worker in profile, wearing a white hard hat and a high-visibility orange safety vest over a dark shirt. The worker is holding a laptop. The background is a blurred industrial or construction site at dusk or dawn, with warm orange and yellow light from the sky.

Introduction to the Government Support Package for the development of Nuclear Power Plants

Introduction to the Government Support Package

- This management summary provides a brief overview of the procedures performed, findings and recommendations with regards to the determination of a preferred Government Support Package (“GSP”). The management summary follows the structure as described below.
- **Context of this Report:** KGG, supported by KPMG and Etara, developed a GSP to enable the Dutch nuclear new-build programme. This follows extensive feasibility studies, market consultations, and the decision of KGG to establish NEO NL, the State-Owned Enterprise (“SOE”) tasked with the project delivery.
- **Decision-Making Framework:** To assess various project models, this Report provides a structured Decision-Making Framework (“DMF”) which enables the assessment of financing- and revenue models across five criteria: Affordability, Feasibility, Impact on State balance, State control, and Risk-sharing. These criteria are supported by two additional prerequisites: EC Approval and market trust.
- **Option analysis:** This Report includes insights from the different financing models, such as private- and publicly financed variants, to the different revenue models, such as RAB, CfD and PPAs by assessing these options along the axis of the DMF criteria.
- **Lessons from EU precedents:** The Report includes insights from EU State aid assessments of similar nuclear projects. These projects underline the importance of proportionality of the aid and minimising market distortion to the EC.
- **Scenario Analysis:** Three scenarios were analysed: (I) fully public; (II) Public + ECA; and (III) Public + ECA + Private (Senior Debt). Additionally, sensitivity analysis underline how sensitive the financial outcomes (such as LCOE and need for revenue support) are to changes in the Business Case assumptions.
- **GSP measures considered:** Three key measures were evaluated: (I) State financing; (II) Revenue support via a CfD; and (III) State guarantees.
- **Recommendation:** Based on the overall assessment, we recommend initiating the project with fully public financing including a CfD, ensuring affordability and continuity. The financing structure should be structured in such a way that the project structure remains flexible for future private capital inclusion.

Context of
this Report



Option
Analysis



..... Decision-Making
Framework



..... Lessons from
EU precedents



Scenario
Analysis



..... GSP Measures
and Recommendation

The unique risks related to Nuclear power development require a well-defined Government Support Package

Considerations for a GSP in Nuclear Power development

- State involvement is essential during the development and construction phases of nuclear power plants. Recent nuclear power initiatives across Europe, such as PAKS II (Hungary), Dukovany 5 (Czech Republic), Lubiato-Kopalino (Poland), and Hinkley Point C and Sizewell C (United Kingdom), highlight the critical role of early-stage State support in ensuring project viability and progress.
- A range of unique risk factors, in the early-stage of such projects, deter private investments. These risks include:
 - **Political and regulatory risks**, such as changes in political landscape, laws and regulation pose a considerable risk that may affect the feasibility or profitability of the project. These risks are magnified by the project's long timelines.
 - **Long-term revenue uncertainty**, as nuclear energy projects are inherently uncertain due to their extended operational timelines. This uncertainty is compounded by the volatility of energy market prices over time. Together, these factors can reduce investor confidence and complicate robust forecasting.
 - **Technology risks**, while the technology has been proven in other locations, the project carries implementation risks because no similar project has been built in the Netherlands for some time. This "*First in a while*" status increases the risk of capital expenditure uncertainties and potential cost overruns compared to fully established technologies.
 - **Capital intensity, financial concentration risks and complexity**, as the project requires substantial upfront capital with a high construction risk given its complexity. This further enhances the risks for private parties and leads to concentration risks on the financiers' balance sheets. Mitigation of this risk requires a consortium of multiple private parties, which increases the complexity of the financial structure of the project.
- Due to the project's risk profile, private financing during the initial phase is both scarce and expensive. The GSP is designed to address these challenges through a coordinated set of measures.

KGG, supported by KPMG and Etara, set out to define a preferred funding structure and GSP

- KGG is currently advancing the preparatory phase of the Dutch nuclear new-build programme. In recent years, key milestones have been reached, including the completion of technical feasibility studies, comprehensive market consultations, and the planning for the (future) establishment of Nucleaire Energie Organisatie Nederland (NEO NL), a SOE, which will be tasked with overseeing the technology selection, construction, operation, and the decommissioning of the plants.
- In recent months, KGG, supported by KPMG, Etara, and other stakeholders, has focused on developing a comprehensive GSP to define the State's role in advancing the nuclear new-build program. These efforts have shaped the initial contours of the GSP, which will be further refined in the coming months through stakeholder dialogue, including with the European Commission for State aid approval, and aligned with the governance and delivery model.
- As outlined in the chapter "Nuclear Power Plant Project Models" and the precedent cases reviewed, there are numerous possible combinations of financing, revenue, and delivery models. Each configuration of options presents its own advantages, disadvantages, and specific requirements regarding the necessary GSP.
- Additionally, some project models are inherently connected to a GSP measure. For example, the financing of the NPP via State debt at low interest rates, may be both a financing model (if owner is State) as well as a GSP measure.
- KGG-supported by KPMG, Etara, and other relevant stakeholders initiated the development of a preferred project model for the financing structure of the NPP, along with a preferred GSP package to support it.
- This initiative was facilitated through a series of workshops, where the involved parties engaged in in-depth discussions on the available options, their trade-offs, and State aid compatibility. To guide the evaluation of trade-offs between different project models, a DMF was established, focusing on key parameters (see subsection: "*Integrated Decision-Making framework*").
- Additionally, a Financial Model was developed to provide quantitative insights into the business case ("Business Case") across various scenarios, including the corresponding GSP requirements.

The various different financing- and revenue models have been assessed based on the Decision-Making Framework

The following criteria of the Decision-Making Framework guide the assessment of the different project models

Integrated Decision-Making Framework	
Criteria	Description
Impact on debt and balance	The impact on debt and balance of the State during the construction and operational phases. This includes the efficiency that both the financing- and revenue model have on supporting the necessary investment- and operations phase, respectively.
Affordability	Affordability relates to the absolute costs of the project. This is measured based on the Levelized Cost of Energy ("LCOE").
Feasibility	The feasibility and timeliness of the financing, with emphasis on the various factors determining whether the financing can be realised within a reasonable timeframe. Feasibility also covers the scalability of the project model and GSP to support additional NPPs that are foreseen after the first two reactors.
State control	The level of flexibility in which the State can control decision making in the delivery entity and act on changes in political preferences. This involves identifying the relevant stakeholders, such as ministries, private investors, and operational companies, and concerns the distribution of ownership rights and the authority to make decisions.
Risk sharing between State, investors and vendors	The financial risks can be allocated among the State, (private) investors, and the vendor. This mainly concerns the construction- and revenue risks, and the potential deviations from the expected budget series for the State, and how these can be minimised to the greatest extent possible.
Prerequisite^(a)	EC approval and Market Trust

Note: (a) Additionally, the DMF consists of two prerequisites: (1) EC Approval; and (2) Market Trust. Prerequisites refers to conditions or requirements that must be fulfilled. These are non-negotiable and do not lead to choices between the various project- and GSP options

The various project models (revenue- and financing model options) were assessed along the axis of the DMF

- The DMF consists of five criteria and two prerequisites.
 - The criteria are defined as the principles by which the various NPP project- and GSP options can be evaluated. They are used to measure, compare, and determine the suitability of the options to the State's preference.
 - The prerequisites, on the other hand, are conditions or requirements that must be fulfilled. These are non-negotiable and do not lead to choices between the various project- and GSP options, other than determining whether a package is acceptable or not.

The assessment of financing models has led to the exclusion of certain options, while requiring further analysis of others along the axis of the DMF

- KPMG assessed the following financing models: State-, ECA-, Private- Vendor-, and Owner-led financing (see subsection: '*Financing Models*').
- Owner-led financing (by a large energy producing company) is unlikely within the Dutch context, whilst Vendor financing has become less feasible as vendor capital is limited.
- Further assessment between State-, ECA- and Private financing requires an assessment along the axis of the DMF, as further explained on the next page.

The revenue models were evaluated using the DMF framework, resulting in the selection of a preferred model based on the assessed criteria

- KPMG assessed the following revenue models: Regulated Asset Base ("RAB", Power Purchase Agreements ("PPA") and Contract for Differences ("CfD") (see subsection: '*Revenue Models*').
- Models such as the Mankala have been considered not applicable in the Dutch context and unviable due to lack of an offtakers market. As a result, this model has not been assessed.
- The remaining models, such as RAB, CfD and PPA have been further assessed along the axis of the DMF on the next pages.

Affordability is the key parameter differentiating between public and private financing

Decision-Making Framework

- For the financing model of the project, both private- and public financing were evaluated (see subsection: financing models) along the axis of the DMF. The table on the right refers to both private- and ECA financing as private financing due to their similarity, highlighting where ECA-financing may differ explicitly.
- Among the DMF criteria, affordability has proven the most decisive.
 - Impact on Debt and balance:** The budgetary impact of private financing depends on the structuring of guarantees and instruments. As we expect limited risk transfer to private capital providers (due to the State guarantees), we expect that the respective State guarantees may qualify as EMU debt-relevant^(a). The exact impact that attracting private capital has on the State's budget requires further assessment and does not yet serve as a clear differentiator.
 - Affordability (LCOE):** This is the **most differentiating parameter**. Differences in cost of capital between public and private capital, due to lower interest rates and return requirements for State debt and equity respectively, consistently results in a lower LCOE. In addition, KGG noted that affordability is an important criterion in the assessment.
 - Feasibility:** This criterion helped eliminate impractical options, such as full private financing from the outset. Other scenarios (introduced in the following pages) have been developed ranging from full State variants to variants where State-, ECA- and private financing are combined. These combinations are considered feasible, provided a market accepted GSP is in place.
 - State Control:** In all viable scenarios, the State retains full or majority ownership of the project entity prior to COD, ensuring strategic control. Therefore, this parameter does not distinguish between financing options.
 - Risk sharing:** While risk allocation is a key consideration, in practice, private capital, especially in early phases, requires extensive State guarantees. As a result, the level of risk transferred to private financial parties (via the financing model) is most likely minimal, making this parameter non-differentiating across scenarios. Risk-sharing may be achieved via the delivery model.

Note: (a) The EMU impact of equity injections, loans, and guarantees depends on how they're structured, specifically, whether they qualify as financial transactions and the likelihood of repayment or guarantee activation.

Assessment of private- and public financing via DMF		
Criteria	Private financing	Public financing
Impact on debt and balance	Private capital may reduce EMU balance impact if sufficient risk is transferred, but required State guarantees likely mean that the impact may be limited. Requires further assessment.	Public financing may impact EMU balance and debt depending on whether equity or debt instruments are used. Debt financing may have lower EMU balance impact than equity injections. Requires further assessment
Affordability	Higher cost due to higher interest rates and required returns. Long construction phase amplifies cost through capitalised interest. ECA financing is cheaper than private, but more costly than public.	Lower financing costs due to government's creditworthiness.
Feasibility	Private financing (at sufficient volume) from the start is unrealistic due to high risk, potentially achieved by extensive State guarantees. At a later stage private funding may be available. ECA-financing is available at an earlier stage (early construction) than private.	Public financing is fully feasible across all assessed scenarios.
State Control	State remains majority/full owner in all realistic scenarios, even with private capital involvement.	State remains majority/full owner in all realistic scenarios, even with private capital involvement.
Risk sharing	Private capital requires extensive State guarantees, especially during development and construction.	State bears most risks during early phases. Risk sharing possible via delivery model.

Feasibility is the key parameter differentiating between the revenue models

Decision-Making Framework

- For the revenue model of the project, RAB, CfD and PPAs were evaluated (see subsection: Revenue Models) along the axis of the DMF.
- Among the DMF criteria, feasibility has proven the most decisive.
 - Impact on Debt and balance:** The RAB model offers revenue during the construction phase, reducing reliance on State financing and the amount of capitalised interest prior to operations. The CfD and PPA do not generate revenue during construction, increasing budgetary exposure.
 - Affordability (LCOE):** The RAB model positively impacts LCOE by limiting capitalised interest. CfD and PPA reduce financing costs indirectly through revenue certainty in the operational phase.
 - Feasibility:** This is the **most decisive and differentiating parameter**.
 - The RAB model is deemed unfeasible in the short timeframe envisaged by the State due to the regulatory setup required in the context of nuclear.
 - The implementation challenges for a CfD are fewer as similar frameworks have been implemented in similar cases throughout Europe. A CfD construct can be permissive and scaled for any volumes of power contracted under long term PPAs (if closed in the future). Accordingly, the CfD is deemed the preferred option.
 - Nuclear base load is well suited for long term PPA arrangements. Given the 10 year + development and construction period however, demand for PPA is typically at a moment close to COD, given more certainty in market prices.
 - State Control:** not applicable across all models, as no substantial differentiation has been identified between the three revenue models.
 - Risk sharing:** RAB shares risk with consumers but may reduce cost control incentives (moral hazard, see subsection: 'Option Analysis').
- The assessment of the revenue models along the DMF has led to the preference for a CfD model, which is well aligned with Dutch- and EU policies. Furthermore, it effectively stabilises operational revenues and reduces investment risk.

Assessment of the revenue models via DMF			
Criteria	RAB	CfD	PPA
Impact on debt and balance	Limited (if not treated as tax) as it primarily relies on funding via consumers ¹ . The revenues during construction reduce the need for State-backed financing	Likely to have an impact on the State's budget but depends on market- and strike price. No revenue available during construction.	Depends on the structure (commercial vs. a government PPA). No revenue available during construction.
Affordability	Limits capitalised interest (and thus capital costs). Positive impact on LCOE	Does not directly affect LCOE. Indirect impact by reducing revenue risk for capital providers.	Does not directly affect LCOE. Indirect impact by reducing market risk for capital providers.
Feasibility	No nuclear precedent in NL or EU. Requires complex and time-consuming regulatory setup.	Preferred method by the EC and fewer legal/regulatory changes needed. It can be implemented without full framework before construction	Requires large, creditworthy offtakers. Less regulatory burden than RAB, but more complex than CfD due to the number of PPAs.
State Control	Not Applicable	Not Applicable	Not Applicable
Risk sharing	Risk sharing occurs with consumers which partially bear cost overruns	Risk during construction lies with investors. CfD support during operations.	Depends on contract structure

Note (1) In this example the costs for consumers are not classified as tax. KPMG did not further assess this assumption.

State aid considerations: Lessons from other European nuclear projects

The GSP measures are subject to the European Commission's (EC) State aid assessment, for which past nuclear power plant cases provide lessons learned

- The GSP measures must adhere to the EC's State Aid rules under Article 107(3)(c) TFEU. Accordingly, the GSP requires structuring in line with these articles. Previous cases, like Dukovany, Sizewell C, Hinkley Point C, Paks II, and Lubiatowo-Kopalino, provide lessons learned across the four key criteria: objective of common interest, necessity and market failure, proportionality, and minimising market distortion.
- The first two criteria of Article 107(3)(c) are typically well established and accepted by the Commission. However, the case studies show that the EC places particular emphasis on the evidence supporting the **proportionality of the aid** and the steps taken to **minimise market and competition distortions**.

1. Objective of common interest

Nuclear projects are recognised as contributing to EU goals like energy security, decarbonisation, and diversification, aligning with strategies such as REPowerEU.

2. Necessity and market failure

The EC acknowledges that nuclear projects face unique financing barriers, high capital needs, long timelines, and regulatory risks, justifying State support through mechanisms like CfDs, debt and equity injections, and guarantees. Precedents usefully show the ability of different and tailored approaches to mitigate the same market failures.

3. Proportionality of the aid

The Commission ensures that aid is limited to the extent necessary to close the funding gap and avoids overcompensation of beneficiaries but does take into account in its balancing assessment positive externalities. The EC uses financial modelling analysis to assess scenarios and may require support modifications as part of its approval conditions:

- Hinkley Point C: Extended profit-sharing and increased guarantee fees.
- Dukovany: Shortened CfD duration and clawback provisions.
- Paks II: Full State financing with profit-return conditions.
- Lubiatowo-Kopalino (no decision yet): EC raised concerns over (potential) excessive aid and broad guarantees.

The GSP measures are subject to the European Commission's (EC) State aid assessment, for which past nuclear power plant cases provide lessons learned (continued)

4. Minimising market distortion

The EC requires legal and operational separation from incumbents, transparent trading strategies, and non-discriminatory auctions to prevent market manipulation and protect competition:

Lessons from EU State aid assessments for Nuclear Power projects (continued)

- Hinkley Point C: Trading transparency and separate accounting.
- Dukovany: Independent governance and mandated market sales.
- Paks II: Structural separation and regulated trading volumes.
- Building on these insights, a number of key lessons emerge from the EC's scrutiny of recent State aid cases, particularly around proportionality and market distortion.
 - First, the EC places strong emphasis on avoiding overcompensation, especially where private equity or private financing is involved. Mechanisms such as clawbacks, capped returns, and equity gain-sharing are essential to ensure that public support does not result in non-market standard, returns.
 - Second, the trading strategy of the nuclear power plant must be designed to support market transparency and liquidity, while avoiding the displacement of renewable energy generation. This is typically achieved through commitments to sell a significant share of output on organised markets and through non-discriminatory auctions.
 - Moreover, there is an increasing focus of the EC on the implications of private PPAs on CfD support mechanisms.
 - Finally, the EC is attentive to the market structure implications of aid. Legal and operational separation from incumbent utilities, independent governance, and restrictions on reinvestment or expansion without further approval are all critical to mitigating risks of market concentration and manipulation. These lessons underscore the importance of designing aid schemes that are not only financially justified but also structurally aligned with broader market integrity and decarbonisation objectives.

Three identified scenarios are assessed through financial analysis

Scenario analysis

- To assess the Business Case and potential financing scenarios, KPMG has assessed three main scenarios (please refer to the 'Scenario analysis'):
- **Scenario I (Full public Scenario)**, considers full public financing until commissioning. A financing structure is pursued which 1) maximises debt 2) keeps the Strike Price of the CfD as low as possible 3) secures the continuity of the SOE. Given these criteria an optimal financing structure of 60/40 D/E is proposed. Government debt includes 0% interest pre-COD and 3.75% post-COD;
- **Scenario II (ECA Scenario)**, attracts private capital from ECAs in the form of multiple loans for a total of EUR 5 billion committed at FID at 5% cost;
- **Scenario III (ECA + Senior debt Scenario)**, attracts capital from both ECA as well as private financiers (defined as senior debt). Apart from the assumptions in Scenario II for ECA, senior debt is assumed to commit EUR 5 billion of capital five years prior to COD at 8% cost, with any State guarantees potentially required to mobilise that capital are assumed to be zero additional cost.
- All three scenarios have the following assumptions in common:
 - Capex in real terms of EUR 30 billion considering a 1650 MW NPP (Based on the upper band of KGG's letter to Parliament)¹.
 - Straight line market price of EUR 75 MWh (in 2025 terms).
 - Availability of 90% and load factor of 100% (resulting in 90% realised output).
 - Indexation of revenue (market price) and Opex of 2%.
 - A CfD is required for each Scenario (could be valued at zero). The CfD is based on total cash needs over each 5-year calibration period, setting a strike price based on the free cash flows required for debt servicing.
 - No target equity return is assumed.

Important limitations to the scenario analyses

- The current Business Case is based on public information assessed by KPMG. There has been no assessment in collaboration with the delivery model / workstream of KGG. KPMG has drafted a Scoping document ('20250904 - Project Split - Scoping document') in which the various parameters, assumptions and sources have been described.
- The fundamentals of the Business Case, such as capital expenditures, technical (site location, technology), operational (availability, load following) and market (electricity prices, inflation), are highly uncertain.
- Given the inherent uncertainties in the Business Case and assumptions on financing (such as commitment value, tenor and interest rates), potential equity stakes by private parties or other refinancing options have not been assessed.
- Changes in assumptions (for example, increases in Capex due to new information) impacts perceived risk, estimated cash flows and therefore capital structure and potential support mechanisms. The current estimates should be considered indicative, focusing on the impact of various assumptions, and are suited for the assessment as described. Results may differ substantially from the projections and assumptions.

Source: (1) Letter to Parliament with reference KGG 97879255 dated 16th May 2025: Voortgangsbrieff nieuwbouw kernenergie mei 2025 - This in no way reflects any preferences between the two vendors and is solely for the purpose of this document and the financial analysis which are done to allow assessment of the GSP.

Further financial analysis underlines the sensitivity of LCOE and CfD support to changes in Business Case assumptions

Insights from the financial assessment

- The top right table reflects on the sensitivities of LCOE and CfD support within Scenario I (fully public) with regards to changes in capital structure and Capex. Additionally, the table reflects the differences between capitalised interest, LCOE and CfD support for the three different scenarios (I, II and III).
- **Cash circulation:** Changes in capital structure (more debt) lead to an increase in the debt service requirement, and consequently the CfD support required (height of CfD Strike price), as shown in point 1 on the right. An increase in the capital structure (such as towards 98/2) requires revenue support (in the form of a CfD top-up payment). This cash circulation (CfD payments from State to the SOE) in return for higher debt repayments (from SOE to State) may be undesirable from effective usage of public funds.
- **General sensitivity:** The Business Case is sensitive to changes in key inputs, such as Capex estimates, and/or extensions in expected construction periods. This is presented in point 2 on the table on the right, which illustrates that in a fully public scenario (Scenario I) a 5-year delay of COD, including a EUR 10 billion Capex overrun, increases the LCOE from EUR 81 MWh to EUR 103 MWh.
- **Accrued interest:** Interest during construction is required to be accrued due to no (or a lack of) incoming cash flows, increasing total debt balance and future interest payments. In Scenario III (with ECA and SD), presented in point 3 on the right, this results in a EUR 2.1 billion increase in total debt at COD (compared to Scenario I).
- **Timing of the support provided:** Less State support in the pre-operational phase of the project, leads to a higher required support during operations as presented when comparing Scenario I (fully public) to Scenario III (Public + ECA + SD) in point 4 in the table on the right. This trade-off is illustrated in the table as a lower amount of state financing (pre-COD) in Scenario III (EUR 8.7 billion lower pre-COD) will lower the (net) cash-inflow post-COD with EUR 21.2 billion.
- In summary, higher interest rates pre-COD (lower State support) leads to higher CfD payments post-COD (higher State support) with the latter post-COD support having to also bear the cost of compounding interest.

Sensitivity analyses				
EUR m and 0% interest pre-COD	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
Scenario I (60/40 Debt/Equity)	-	81	0 (0 quarters)	4.5%
70/30 Debt/Equity	-	83	6 (20 quarters)	4.9%
98/2 Debt/Equity	-	94	17 (60 quarters)	8.6%
Scenario I (EUR 30b real Capex, 2% inflation)	-	81	0 (0 quarters)	4.5%
EUR 10b Capex cost overrun	-	98	8 (40 quarters)	3.5%
+ 5 year delay	-	103	9 (20 quarters)	3.5%
Scenario I (Public financing only)	-	81	0 (0 quarters)	4.5%
Scenario II (Public financing + EUR 5,000m ECA (5%))	1,284	88	17 (40 quarters)	5.0%
Scenario I + EUR 5,000m SD (8%)	814	90	20 (40 quarters)	4.9%
Scenario III (Public + ECA + SD)	2,098	98	25 (60 quarters)	5.4%

Cash flow to the Dutch State						
EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065
Scenario I - Public financing only						
Cash out flow	(39,183)					
Cash in flow		7,901	8,748	9,817	10,761	11,954
Total per period	(39,183)	7,901	8,748	9,817	10,761	11,954
Total cash flow to the Dutch State						
						9,997
Scenario III - Public + ECA + SD						
Cash out flow	(30,503)	(8,907)	(4,919)	(1,078)	-	-
Cash in flow		8,605	8,247	6,463	7,317	12,262
Total per period	(30,503)	(303)	3,328	5,385	7,317	12,262
Total cash flow to the Dutch State						
						(2,514)
Delta cash flow pre-COD	8,680					
Delta cash flow post-COD		(8,203)	(5,420)	(4,432)	(3,444)	307
Sum delta pre-COD	8,680					
Sum delta post-COD	(21,191)					
Net timing effect	(12,511)					

In both a public and private financing scenario, the project will require a combination of measures 1, 2 and 3 (1/2)

Measure 1: State financing ensures policy goals of low cost

- Public financing, via equity and/or debt, ensures lower costs (compared to private financing).
- The scenario analyses highlight the sensitivity of LCOE and Project IRR to the cost of capital. In Scenario III, the addition of ECA and senior debt financing increases the LCOE from EUR 81 MWh to EUR 98 MWh. Public funding offers a cost-effective solution.
- Sensitivity analysis of the construction costs shows that the LCOE can increase substantially in case of construction delays combined with higher Capex. For example, a scenario involving a 5-year construction delay, EUR 10 billion in additional costs, and 2% higher Capex inflation results in an EUR 134 MWh LCOE¹.
- On the other hand, it has been argued that the inclusion of private financiers may add to the scrutiny on the project by conducting due diligence and stringent project governance and therefore limiting cost overruns. The subsection: '*Scenario Analysis*' illustrates that this added value must contribute significantly to offset the higher capital costs from private financiers, which amounts to EUR 7.8 billion (comparing Scenario I (fully public) to Scenario III (ECA + senior debt)).
- The State has expressed its preference for (partial) public financing of the project via debt instruments to formalise (timely and periodic) repayment of capital provided. KPMG notes that debt instruments have the advantage over equity injections. As equity gives the right to dividends, which from a legal point of view has a different security.
- Due to the long construction period and accrual of interest, attracting private debt impacts the LCOE (increases), whereas the height of the LCOE is a key consideration of the State.
- The LCOE is also in a scenario with full public financing dependant on the on the pre-COD interest rate. As the interest rate is:
 - I. Paid upfront, requiring equity injection due to the absence of revenue and therefore cash generation in the pre-COD phase; or
 - II. Accrued, increasing the total debt commitment.

Note (1) Please refer to page 79 for the sensitivity analyse.

Measure 1: State financing ensures policy goals of low cost (continued)

- In both cases additional equity from the State is required to solely support the debt structure. Which leads to a higher LCOE, despite the Dutch State being both lender and borrower.
- As a result, a 0% interest debt instrument can be considered.
- The capital structure relies on the SOE's ability to service its debt obligations. A higher proportion of debt in the capital structure leads to an increase in debt service.
- In case the capital structure is optimised on the basis of the maximum debt service capacity (DSCR = 1), cost overruns may pose a significant challenge for the State. Financing cost overruns with additional debt leads to a (higher) required debt service that the SOE will not be able to bear based on its Business Case.
- The overruns may be covered by:
 - I. Additional equity and/or debt in combination with;
 - II. An increase in the revenue support in the form of an increase of the CfD's strike price.
- Summarised, structuring the project on the basis of the maximum debt service capacity may constrain its ability to absorb cost overruns, unless additional revenue is secured via the CfD or the shortfall is covered through extra equity contributions.

Measure 2: a revenue support mechanism, in the form of a CfD, to provide long-term revenue certainty

- In line with the EC's Electricity Market Design (EMD) reforms, the State prefers to provide revenue support via a (two-sided) CfD mechanism. The exact details on the structuring of the CfD depends on further refining the Business Case assumptions and financial structure that drive the debt service capacity. The principles guiding the CfD structure include: i) duration of the CfD; ii) Strike Price formula; iii) Reference Price; iv) Floor and Cap options; v) Incentive mechanisms for cost control, load following and operational efficiency; vi) Profit-Sharing mechanisms.

In both a public and private financing scenario, the project will require a combination of measures 1, 2 and 3 (2/2)

Measure 2: a revenue support mechanism, in the form of a CfD, to provide long-term revenue certainty (continued)

- The CfD model guarantees a fixed price for electricity during the operational phase of a NPP, shielding it from market developments. The resulting revenue stability significantly reduces investment risk, making it more feasible to secure financing in the operational stage and lowering the cost of capital, or in the construction phase if coupled with other construction phase risk mitigation contracts.
- Given its policy on state owned enterprises (SOE), the government requires a target return on equity from a SOE (article 5.7.3, '*Nota Deelnemingenbeleid Rijksoverheid 2022*'). Next to going-concern considerations, the (required) return of the SOE may indicate the need for a (revenue) mechanism to support cash flows, even when fully public financed.
- Given the i) the current assumptions in the Business Case ii) the proposed capital structure of 60/40 Debt-to-equity and financing assumptions, the current assumed market price of electricity is sufficient to cover its debt service (i.e. the currently resulting strike price is lower or equal to the assumed market price).
- The CfD should be periodically calibrated to ensure its alignment with developments in the Business Case of the NPP. The frequency will be further assessed.
- The proposed revenue support plays an important role in the expected allocation of risk and return that private capital (debt/equity) providers perceive. The CfD only mitigates the significant market price risks during operations, while other significant risks, such as the risk of non-completion of the project, are concentrated in the development and construction phases.

Measure 3: State guarantee / Change of law protection

- For the decommissioning of the plant, the ANVS requires, by law¹, operators of nuclear installations to provide a fully funded plan for decommissioning and dismantling the facility from the moment the installation becomes operational.
- Funding this provision is costly as the financial resources are retained with limited returns.

Measure 3: State guarantee / Change of law protection

- The goal of the regulation is to ensure that private parties reserve sufficient capital to dismantle the NPP. Given that the State has full ownership of the NPP the regulation results in the retaining of significant public funds which cannot be effectively deployed. To follow the regulation and ensure effective usage of public funding, a State guarantee with regards to the decommissioning fund can be considered.
- The State aims to provide a guarantee (against a premium). However, this approach remains uncertain, as discussions with the relevant ministries are still ongoing and have not yet been finalised.
- Given the intention to attract private capital in a later stage (specifically pre-COD), it may be necessary to provide State guarantees, which includes, amongst others, completion guarantees, change-of-law protection and political risks. These instruments are designed to reduce the perceived risk for private capital (especially) prior to the operational phase.
- Specific guarantees have not been further assessed at this moment, as these are tailor-made measures that are often the result of negotiations with private capital providers.
- If private capital may be attracted, support by public funds could potentially be lowered (Measure 1), albeit against an increase in guarantees provided (Measure 3) that private capital may require.
- Whether a measure, such as: (i) equity injection; (ii) a loan; and (iii) a guarantee impacts the State's debt and balance depend on their Economic Monetary Union (EMU) treatment^(a). The positive impact that attracting private capital may have on the EMU deficit and the State's budget depends on the structuring of such guarantee and how this is accounted for in the State budget.

Note: (a) The EMU balance (government deficit) and EMU debt (government debt) are key indicators used by the EU to monitor the fiscal health of its member states. The Stability and Growth Pact sets limits of 3% of GDP for the annual government deficit and 60% of GDP for total government debt.

Source: (1) Article 15f of the Dutch Nuclear Energy Act: Staatscourant 2011, 4386 article 15f.

We recommend a structure that provides flexibility to attract private financing and aligns with KGG's aim of affordability (1/2)

Initial phase – Fully public financing

- KPMG concludes that fully public financing at the start of the project is the preferred financial structure when taking into account the financing models, project risks, EU State aid precedents and the DMF.
- This conclusion is supported by the DMF, which identified affordability (in terms of LCOE) as the most differentiating criterion. Public financing delivers the lowest LCOE due to the favourable cost of capital of the Dutch State, making it the most cost-effective choice for the initial phase.
- In a fully public scenario, the following three key measures are expected to be implemented:
 - **Measure 1 – State Financing:** The State provides full financing through a capital structure while, based on the current Business Case, avoiding additional revenue support as much as possible (in the form of a CfD strike price above market price). This structure assumes the following:
 - 0% interest on public debt pre-COD and 3.75% interest on public debt post-COD; and
 - that maximises debt-to-equity ratio, which leads to a 60/40 debt-to-equity ratio.
 - The proposed capital structure will require further calibration, as the Business Case further develops, to ensure that the SOE is going-concern. Covering all obligations (such as repayments and interest) from market sales, with or without a CfD.
 - The acceptability of a 0% pre-COD interest rate, in the context of the approval of state aid by the EC, remains uncertain, with only one precedent. The assumed RoE may also be insufficient, and both require confirmation through engagement with the EC.

Initial phase – Fully public financing (continued)

- **Measure 2 – Revenue support via CfD:** KPMG advises the introduction of a two-sided CfD to mitigate market risk, specifically with regards to the development of energy prices, to support the entity's continuity.
- The CfD is based on total cash needs over each 5-year calibration period, setting a strike price based on the free cash flows required for debt servicing. The CfD is not introduced to cover operational and maintenance expenses.
- There is currently no target return for equity. This prevents cash flows (cash circulation) from the State to the private entity NEO, which can be deemed ineffective.
- Additional CfD design elements, such as floor and cap mechanisms, excess profit sharing, and incentives for operational efficiency, would be introduced to align with EDM guidance and maintain proportionality
- Given the proposal capital structure and the Business Case, the strike price of the CfD is currently equal to the expected market price of electricity.
- **Measure 3 – State guarantees:** KPMG advises the State to provide a guarantee to NEO on the decommissioning fund to ensure regulatory compliance, while avoiding setting up significant provisions from COD onwards with public funds.

We recommend a structure that provides flexibility to attract private financing and aligns with KGG's aim of affordability (2/2)

Initial phase – Fully public financing (continued)

- Taking into account the current Business Case and financing market, in combination with the considerations from the DMF, KPMG concludes that full public financing is optimal at this stage.
- To accommodate future market developments and evolving project conditions, it is essential to retain flexibility in the capital structure. The capital structure and its terms and conditions should therefore be designed to allow for potential inclusion of ECAs and private capital at a later stage.
- If private financing is introduced, the three measures must be amended accordingly:
 - **Measure 1 – Adjusted State financing:** The State's share of financing decreases when ECA, and private debt are introduced. This will likely increase the project's cost of capital, and thus debt servicing requirement. Risk allocation, however, may remain unchanged depending on the level of support and guarantees that ECAs and other private financiers require.
 - **Measure 2 – Enhanced CfD:** The CfD strike price would need to be adjusted to accommodate the higher debt servicing requirement resulting from the increase in cost of capital and DSCR (above 1.0) requirements.
 - **Measure 3 – Expanded guarantees:** Beyond the decommissioning fund, specific guarantees are likely to be required to attract private capital. Whether these guarantees have an impact on the State's EMU debt and budget must be carefully assessed based on the actual risk transfer from the State to private parties.

Initial phase – Fully public financing (continued)

- In conclusion, a phased financing strategy, starting with full public financing and allowing for future private participation, offers the best balance between affordability, strategic control, and adaptability.
- This approach aligns supports the Dutch State's policy objectives. It also ensures that the GSP remains responsive to future developments, while safeguarding financial and operational integrity of the nuclear power plant.

Chapter

Management Summary

Introduction

Precedent NPP models used in Europe

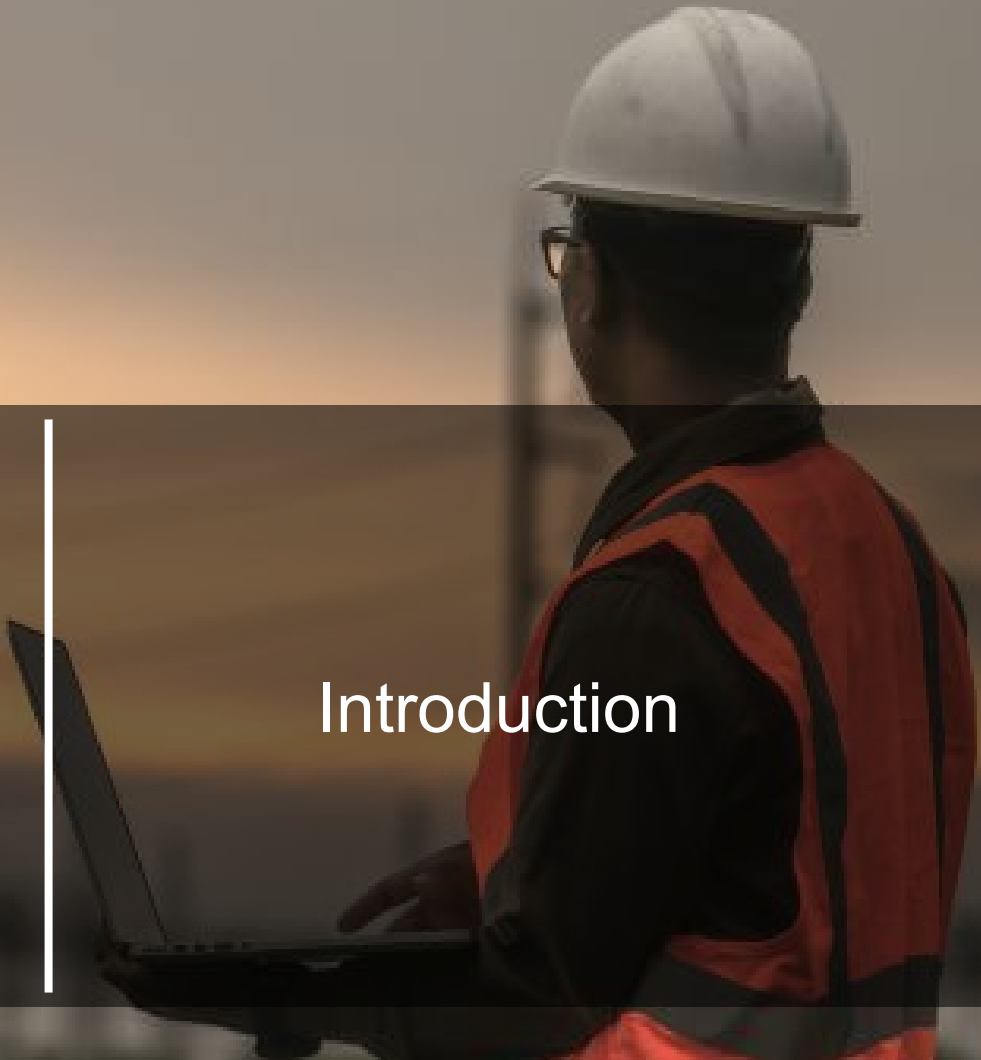
Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

Introduction

A person wearing a white hard hat and an orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn, with warm lighting.

The development of nuclear power plants is considered a key pillar in achieving a CO2-free electricity system by 2035

Nuclear energy as a pillar of a CO2-free electricity system

- The National Energy System Plan (“NPE”) outlines the ambition to achieve a CO2-free electricity system by 2035. Within this framework, nuclear energy is positioned—alongside wind and solar—as a core pillar of the future energy system.
- The government is currently preparing for the construction of two new Nuclear Power Plants (“NPPs”), with each NPP consisting of two reactors. The first NPP is expected to become operational as soon as possible after 2035.
- The decision to invest in nuclear is driven by several strategic considerations:
 - **Reliability:** Nuclear power provides stable and weather-independent electricity supply, enhancing overall robustness of the energy system.
 - **Strategic autonomy:** Domestic nuclear production reduces reliance on energy imports. While uranium is sourced internationally, local reserves may enable multi-year stability, contributing to national energy security.
 - **Efficient Land use:** Compared to wind and solar, nuclear energy requires significantly less land per unit of energy, an important consideration in the spatially constrained Dutch context.

Market Consultations underline the importance of Government support

- To assess market interest and feasibility, the government requested EY and BNP Paribas to conduct market consultations, following the earlier market consultation carried out by KPMG in 2021. These studies concluded that:
 - The allocated State budget is insufficient to realise all four reactors.
 - It is unlikely that the private sector will bridge the financing gap between the required investment and the available public financing.
- As a result, market participants expect the government to provide a comprehensive Government Support Package (“GSP”) to close this gap and offer visibility and certainty to the industry.
- A Third-Party Review (“TPR”) conducted by Amentum validated these findings and reaffirmed that the government will need to play a significant role in financing the early phases of the nuclear projects.

Note: (a) The current market for Nuclear technology providers provides limited competition, with KHNP largely pulling back from the European market. Additionally, competitive procurements are subject to legal challenges, which may lead to long delays of the project. The form of procurement of Dukovany, for example, has led to longstanding legal claims, which undermine the project timelines.

Sources: World Nuclear Association; Financing Nuclear Energy; Amentum Third Party Review; BNP Paribas Dutch Nuclear Newbuild Program; KPMG Market consultation Nuclear; EY Dutch Nuclear New Build Program.

Key characteristics of nuclear power plant which require support from the State

- **High upfront capital costs** as NPPs require substantial initial capital outlay. The costs include the expenses for detailed design, regulatory approvals, construction materials, advanced technologies, and highly skilled labour.
- **Long construction periods**, as building a NPP requires an extensive period of up to 10 years. Over a long construction period, during which there are no revenue streams from the project, interest on borrowed funds can compound into significant amounts. Furthermore, long construction periods increase exposure to risks associated with political landscape, regulatory shifts, and technological advancements.
- **Lengthy payback periods**, returns on investment take decades, which is unattractive to many private investors with shorter horizons and preference for quicker returns. This long payback horizon also exposes the business and investment case to market price forecasting over a 70-year period, far exceeding the typical range of expert reports (5–20 years).
- **Market structure and revenue risk** as price and demand volatility lead to uncertain revenue streams in deregulated electricity markets. State-backed mechanisms like long-term power purchasing agreements (“PPAs”) are necessary.
- **Technical, regulatory and political complexity**, as NPPs are subject to high technical risks and complex, evolving regulatory requirements. These challenges can lead to delays, cost overruns, and uncertainty. Additionally, the sector is highly sensitive to political decisions and public opinion which can lead to foreclosure prior to the project’s lifetime, negatively impacting project viability.
- **Liabilities and long-term responsibilities**, as responsibilities with regards to waste management and decommissioning extend far beyond the operational life of the plant and require financial mechanisms that are often guaranteed by the State where liability exposure depends on future State decisions or where private insurance markets lack sufficient depth, notwithstanding polluter pays principles.
- **Competitive landscape of vendors** as competitive procurements for technology in Europe are prone to legal challenges^(a) and commercial challenges as the bargaining power shifts toward technology providers.

The development of nuclear power plants consists of 5 phases with each phase having specific characteristics and risks

Based on IEA guidelines, the development of nuclear power plants consists of five phases. The work currently being done for the Netherlands corresponds to the feasibility phase¹

- **Feasibility phase:** This phase involves evaluating all issues that would be involved in introducing nuclear power. This entails initial studies to determine the feasibility of nuclear power, including analysing potential sites, technology options, and economic viability. At the end of this phase the State should be ready to make a knowledgeable commitment to a nuclear power programme.
- **Development phase:** This phase involves detailed planning and preparation for the nuclear power program, including project plans, regulatory setup, financing, site preparation, technology selection, and contract finalisation. It also includes establishing legal frameworks and key organisations to coordinate efforts. By the end of this phase, the State should be ready to invite bids or negotiate a contract for the NPP.
 - The IAEA guidelines are global, but in Europe, the development phase can be split into two: pre- and post-State aid approval. The pre-approval phase is particularly time-consuming due to its complexity and political sensitivity.
 - At the end of the development phase and before construction begins, the Final Investment Decision (“FID”) is made, the formal approval to commit capital and proceed with the project. While FID can occur earlier, it is typically aligned with the Final Notice to Proceed (“FNTP”) under major construction contracts and marks the start of commitment and drawdown for project-secured or State-guaranteed debt financing.
- **Construction phase:** This phase includes building the nuclear power plant and associated infrastructure and conducting safety and quality assurance checks.
- **Operational phase:** During the operational phase, the nuclear power plant is tested and commissioned, and day-to-day operations are managed. This phase includes performing initial testing and commissioning of the plant, operating the plant according to established protocols, and conducting routine maintenance and safety checks.

- **Decommissioning phase:** The decommissioning phase involves developing a decommissioning plan, safely dismantling the nuclear reactor and associated facilities, and managing radioactive waste and environmental restoration.

Phasing of nuclear power plant project and key risks

Criteria	Key Risks per phase
Feasibility phase	Political risk: vulnerable to changes in government policy or public opposition. Economic risk: uncertainty in cost estimates and funding/financing availability
Development phase	Technical risk: challenges in technology selection and integration Financial risk: securing sufficient financing and managing costs Regulatory risk: delays in obtaining necessary approvals
Construction phase	Construction risk: delays and cost overruns Supply chain risk: availability and reliability of materials and equipment Regulatory risk: ensuring compliance with safety standards
Operational phase	Operational risk: Equipment failure and inefficiencies Safety risk: ensuring safety to avoid potential for accidents Regulatory risk: compliance with ongoing regulatory requirements Political risk: vulnerable to changes in government policy or public opposition.
Decommissioning phase	Environmental risk: managing radioactive waste and site contamination Financial risk: high (and uncertain) costs associated with decommissioning Safety risk: ensuring safe dismantling and waste disposal

Source: (1) IEAE: Milestones in the Development of a National Infrastructure for Nuclear Power.

The government is preparing for the construction of two NPPs, with the first expected to become operational as soon as possible after 2035 (1/2)

The status of the project

- The government has selected Generation III+ reactors as the preferred technology, though a technology provider is yet to be selected. Reactor designs range from 1,050 MW to 1,650 MW. In agreement with KGG this Report uses the upper bound of 1,650 MW.
- Assuming two 1,650 MW reactors, the plant would generate around 24 terawatt-hours of electricity, equivalent to 9-13% of the projected 2035 energy supply.¹

Governance structure

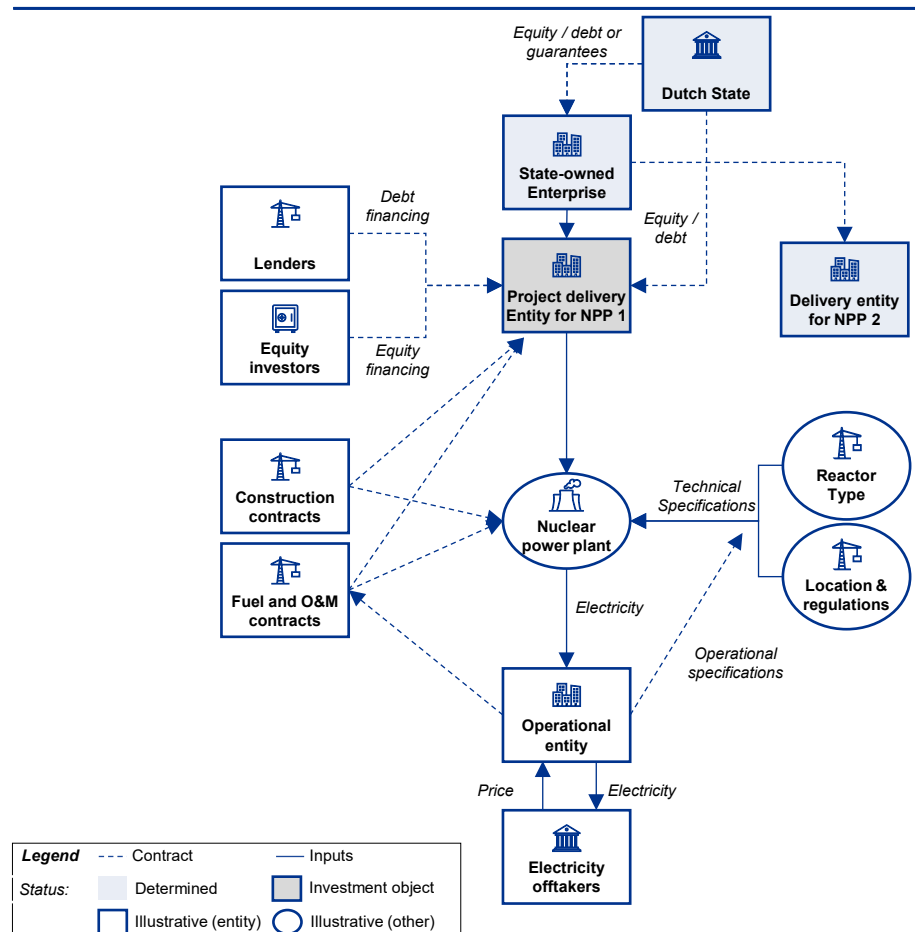
- The government has decided to develop the NPPs through a State-owned enterprise (‘‘SOE’’). This SOE will be structured as a holding company, and each SPV under the holding will run two reactor units. This structure provides the State with the flexibility to individually manage and dispose of operating entities and their assets through the holding company.
- The project delivery entities, responsible for the development of the investment object, may be financed by the government, either through the SOE or directly, as well as by lenders through debt financing and equity investors through equity financing. The financing structure is not yet determined.

Technical design and feasibility

- The government has engaged three international technology suppliers, Westinghouse (US), EDF (France) and KHNP (South Korea) to conduct technical feasibility studies on their designs.. At this stage, KHNP has withdrawn from all major European nuclear power projects, except for the one in the Czech Republic, citing strategic priorities as the reason for its decision.²
- These studies assessed whether the proposed reactor designs comply with Dutch regulations, can be physically integrated at the preferred site in Borssele, and are feasible in terms of construction time and cost.
- The outcome of these studies have been validated in the technical project review and assessed by the Authority for Nuclear Safety and Radiation Protection (ANVS) in a ‘‘general assessment’’.³ The technical feasibility studies found no immediate obstacles to licensing any of the proposed designs.

Sources: (1) Rijksoverheid: Kernenergie; (2) Kamerstukken II, 2024/25, 32 645, nr.139; (3) Kamerbrief KGG met kenmerk 98794225: ‘‘Voortgangsbrief nieuwbouw kernenergie mei 2025’’

Object of investment



The government is preparing for the construction of two NPPs, with the first expected to become operational as soon as possible after 2035 (1/2)

Technical design and feasibility (continued)

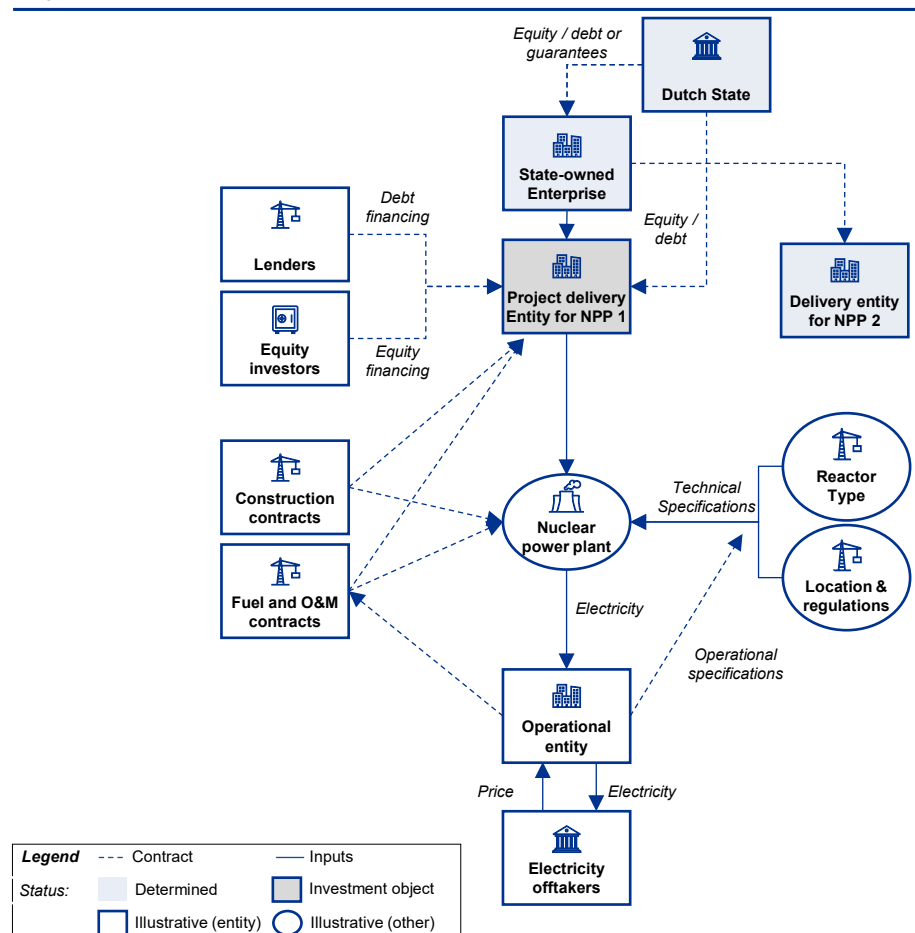
- The technical project review concluded that modifications to the Borssele site are necessary to accommodate the different designs. To ensure a competitive selection process, it's important that multiple designs can be physically implemented. The technical project review advises that if Borssele is chosen, further expansion of nearby land is required. Since location, available space, costs, and risks are closely linked, the project must be carefully managed to support a competitive technology selection. The government is currently pursuing this approach.¹
- The government plans to organise the technology selection process as a competitive procedure. The process will be phased, allowing evaluation and refinement of bids in stages. The preference is that the selection process will begin with location-independent criteria, while location-specific aspects will be addressed once the site is chosen. This approach encourages maximum competition and flexibility, unlike direct agreements with governments from which vendor arrangements may follow, which bypass competition.¹
- The government will present the principles and planning for the next 2–3 years to achieve a definitive technology selection to Parliament after the summer.¹

Location decision

- The Dutch State is in the exploratory phase of the project procedure to determine the location for two new nuclear power plants. Seven locations (including the preferred location in Borssele) across four regions are being investigated: Two in the Sloe area (Zeeland), One in Terneuzen (Zeeland), One on Maasvlakte II, Three in the Eemshaven. If multiple locations are deemed suitable, the government prefers a site in Zeeland.¹
- The progress in the exploratory phase is mainly driven by public input, coordination with regions, and the evaluation of research results. The government expects that by Q2 2026, the Integrated Impact Assessment (including the environmental report) will be robust enough to support a preferred location decision. If so, the draft decision and supporting documents will be published after summer 2026, followed by a final decision after public consultation¹.

Sources: (1) Kamerstukken II, 2024/25, 32645, nr.157; Rijksoverheid: Kernenergie.

Object of investment

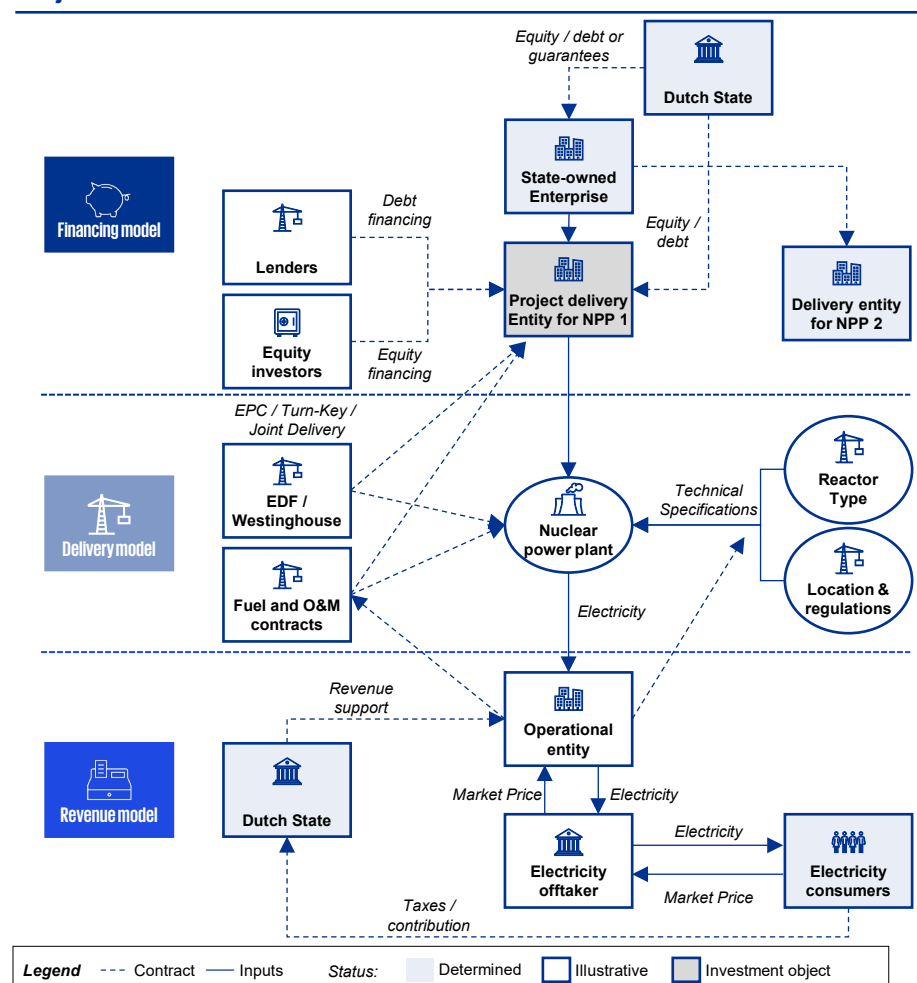


KGG is currently exploring project structures in support of vendor selection

KGG requested KPMG to support the assessment of various structures in support of the vendor selection

- The project is currently in the feasibility phase, with ongoing feasibility studies and establishment of conceptual preferences to advance to the construction phase. The government has decided to develop the NPPs through a SOE. The SEO will be structured as a holding company, each SPV under the holding will run two reactor units, each responsible for the construction and operation of the NPPs. This structure provides the State with the flexibility to individually manage and dispose of operating entities and their assets through the holding company.
- The current phase requires a decisions with regards to the project models:
 - **The financing model:** The government, as a shareholder, either directly or indirectly through an SOE, is expected to play a substantial role in financing the NPPs. The project structure also allows for capital contributions (debt/equity) from other parties.
 - **The delivery model:** In the current phase, several key aspects of the delivery model, including vendor selection and respective technical and financial specifications, are yet to be decided. Additionally, the location of the NPPs remains undetermined, which will significantly impact the technical specifications.
 - **The revenue model:** The revenue model of the operating entity is yet to be determined. Based on the market consultations, it is assumed that the operational entity will require some form of revenue support to assure private capital providers of their investment.
- The State must establish a project framework that integrates the financing, delivery, and revenue models, considering their interdependencies. For instance, a strong delivery model that mitigates investor risk can enhance the project's attractiveness to investors, thereby increasing the chances of securing private financing.

Project model



State support is necessary to mitigate higher costs and /or lower returns resulting from specific risks that characterise nuclear power plants

Project structure choices have implications on the GSP

- The choice for a project structure (financing-, delivery- and revenue model) also has implications for the government support that market participants require. For instance, if the government chooses to apply a CfD as part of its revenue model, investors are likely to require the counterparty of this CfD to have a financially strong backing by the Dutch State.
- The assessment for which KPMG has been appointed focuses on the financing workstream and seeks to develop a preferred GSP which will support the chosen project models and facilitate the nuclear newbuild project. The components of the GSP may include one (or a combination) of the following mechanisms:
 - **Owner financial support:** (Direct) equity investment from the government in the form of an equity stake in the project delivery entity (direct) or in the SOE managing the project delivery entity (indirect). Additionally, the government would be able to providing (in-)direct lending to the project.
 - **Lender/equity support:** government guarantees for lenders and or equity providers against financial risk.
 - **Revenue support:** government support in stabilising revenue streams for the project, shielding it from market volatility.
 - **Project risk allocation:** methodical distribution of diverse risks among stakeholders, accompanied by clear frameworks and agreements.
 - **Insurance and indemnities:** compensation from the government for losses incurred due to identified risks and unforeseen adverse events.
- The identified GSP should lead to sufficient clarity on the position of the Dutch State to start the process for selection of a vendor in 2026 or later.
- We note that, the different project structures (see subsection: *'financing models'* and *'revenue models'*) are inherently connected to GSP measures. For example, the financing of the NPP via State debt at low interest rates, may be both a financing model (owner financial support) as well as a GSP measure.

The role of the Government in developing this project is being further detailed

- KGG is working towards a decision in 2025 on the role of the national government in the nuclear newbuild. KGG has divided the project into four workstreams:
 1. A technical workstream aimed at the delivery model and vendor selection;
 2. A location assessment workstream aimed at deciding on a preferred location;
 3. A “Rijk-Regio pakket” workstream aimed at minimising the impact on environment and maximising opportunities for the region; and
 4. A financing workstream aimed at developing a GSP and the role that government will play in financing the NPPs.

Despite cost overruns and extensive required State support, nuclear projects remain economically and strategically of interest due to their long asset life

- While nuclear power plants demand significant upfront capital, their operational lifespan (often exceeding 60 years) enables cost recovery over an extended revenue period. This long-term horizon enhances economic resilience, even when initial capital expenditures surpass expectations.
- The ability to generate stable, low-cost electricity over decades means that, independent of construction risks or financing structures, the core Business Case for nuclear remains cash-positive.
- Beyond financial metrics, nuclear assets deliver strategic value: they provide reliable, dispatchable, low-carbon baseload power, bolster energy security, and support national decarbonisation targets. These attributes reinforce the investment rationale, even when short-term financial pressures are present..

KPMG's assignment is to provide advisory services with regards to the development of a preferred GSP

The Ministry of Climate and Green Growth ("KGG") has requested advisory services from KPMG

- KGG requested KPMG and Etara Partners Ltd ("Etara") for guidance on the financing structure and GSP for the construction of two nuclear power plants. Specifically, KGG requested advise on the following topics:
 - **Overall strategic support:** KGG requested KPMG and Etara to provide strategic guidance on the overall structuring of the financing package, drawing lessons from previous nuclear newbuild projects.
 - This included advising on key steps and milestones, analysing the relationship between the financing structure and the technology selection process, conducting ongoing risk assessments, and offering preliminary insights into potential contractual arrangements.
 - KGG requested KPMG and Etara to assist in preparing a decision-making framework ("DMF") that will help the government evaluate and compare different revenue and financing models.
 - **Quantitative assessment of the financing structures at the project level:** KGG requested the development of a financial model ("Financial Model") for the nuclear newbuild project. Based on this model:
 - KPMG carried out scenario analysis and stress tests which can be used in future decision-making processes, including State-aid procedures.
 - KPMG assessed various financing options over time, including refinancing strategies, and provides insights on the benefits and drawbacks of involving private finance.
 - **Quantitative assessment of the financing structures at the government level:** KGG requested analyses on how the different financing structures impact the government.
 - This includes evaluating options such as subsidies, guarantees and direct investments, and assessing their long-term impact on the public budget.

KPMG structured the advisory services in 5 workstreams

1. **Option analysis:** assessment of project and financing structures for NPPs.
 2. **Integrated Decision-Making Framework:** The development of a framework to compare and evaluate GSP options.
 3. **Strategic advisory support:** Strategic advice in interdepartmental discussions
 4. **Modelling:** the development of two models to analyse project finances and government budget impact
 5. **EC State aid assistance:** Provide input for State aid processes.
- KPMG organised regular workshops to align stakeholders, review progress and document key decisions.
 - KPMG acknowledges the importance of incorporating the best practices from similar projects. Accordingly, this project draws from the broader KPMG network's experience with NPP projects. Additionally, Etara has provided advisory support that leveraged on their in-depth knowledge of NPP development in Europe and has provided insights on the best market practices (via their participation in workshops and review of the report).

KPMG's assignment is limited to providing advisory services with regards to the development of a preferred GSP

- The delivery model of the project is the responsibility of KGG. It is explicitly out of scope of KPMG. KPMG notes that the delivery model can have significant impact on the risks of equity and debt providers and should be assessed accordingly.
- Many of the hypotheses presented in this document are based on our experience with comparable projects in the international context and KPMG's expertise. Note that these findings should be further validated. This ongoing process, which is structured as part of the broader project development and market sounding process, will help determine whether the assumptions hold in the Dutch context and whether investor preferences have evolved.

Advancing Towards a Preferred GSP Package Through Strategic Evaluation and Stakeholder Engagement

As part of the broader process, this report represents the next step towards a preferred GSP

- The reports from Amentum - Third Party Review, BNP Paribas - Dutch Nuclear Newbuild Program and EY – Renumeration models & financing structures have been thoroughly reviewed. Earlier reports have been reviewed, and the conclusions and insights derived from them are referenced and built upon. This report represents a next step in the overall process.

Stakeholders were actively engaged through meetings, workshops, and other discussions, allowing for the incorporation of valuable input throughout the process

- Over the past months (March 2025 – August 2025), KPMG has worked closely with the KGG project team to advance the various workstreams (e.g., financial model, option analysis) and move towards the development of this report. To ensure structured collaboration, weekly update calls were established between KPMG and the KGG project team. These calls served to monitor progress across the workstreams and to incorporate valuable input from the KGG project team.
- KPMG organised monthly workshops. These workshops were designed as iterative sessions, emphasising preparation, reflection, and joint discussion with the relevant stakeholders. Stakeholders attending (some of) the workshops included the KGG project team, delegates from the Ministry of Finance, Etara and KPMG.
- Additional meetings were held with the Ministry of Finance, Wetgeving en Juridische Zaken (“WJZ”) (part of KGG) and Afdeling Eigenaarsadviesing to review progress across the various workstreams, gather feedback, and ensure active engagement of these key stakeholders.
- Throughout the course of the project, KPMG engaged with professionals from its KPMG international network who have experience with NPPs and through collaboration with Etara, who contributed their in-depth knowledge of NPP development in Europe through several meetings, discussions and reviews.

Over the past months, substantial efforts have been undertaken to advance the work, culminating in the preparation of this report

- A DMF was developed through an iterative and collaborative process involving key stakeholders and experts. This approach ensured that the framework reflects a broad range of perspectives and is grounded in practical, policy-relevant insights. The DMF serves as a structured tool to guide the evaluation and comparison of different project and GSP options along the axis of five key criteria, of which affordability has been determined as the differentiating criteria.
- As part of the option analysis, individual financing and revenue models were examined in detail. Multiple sessions, as outlined on the left, aimed to identify and articulate the key characteristics, strengths, and limitations of each model. In parallel, each option was systematically evaluated against the DMF.
- Based on the assessment of the various options along the axis of the DMF, certain scenarios have been disregarded and others analysed further. The latter ones have been assessed via a Financial Model that KPMG has developed.
- The quantitative assessment of the individual scenarios has also led to sensitivity analysis in order to gain further insights on how key parameters respond to changes in the business case (“Business Case”), capital expenditures and financing assumptions (see subsection: ‘*Scenario Analysis*’).
- This assessment has been conducted under the guidance of the DMF, which provides a structured approach to evaluating the financial and strategic implications of each different project models. The assessment has led to a preference for a project model that seeks affordability, measured as the lowest Levelized Cost of Energy (“LCOE”). As a result, this has led to a project model that is heavily financed by public funds but maintains flexibility to attract private financing at a later project stage.

Chapter

Management Summary

Introduction

Precedent NPP models used in Europe

Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

A person wearing a white hard hat and a high-visibility orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn.

Precedent NPP models used in Europe

The success of a nuclear power plant project depends on the effectiveness of its financing-, revenue-, and delivery model

When developing NPPs, three interdependent project models must be considered, as they collectively determine the project’s feasibility

1. **Financing model:** outlines the financial structure and capital sources necessary for the construction and operation of an NPP. It defines how financing is arranged through a mix of debt, equity and the overall gearing ratio (debt-to-equity balance). Common financing models for NPPs include:
- **State Financing:** Direct government financing via equity injections and loans. This includes variations such as State guarantees, rather than direct financing.
 - **Export Credit Agency (“ECA”) Financing:** Loans or guarantees supported by ECAs, typically tied to contracts with domestic exporters.
 - **Private Financing:** Investment from private entities such as pension funds or infrastructure investors.
 - **Owner-Led Financing:** Equity contributions from the NPP owners (e.g., government or consortia), using their own capital.
 - **Vendor Financing:** Financial support from technology or equipment suppliers, often in the form of loans or guarantees.
2. **Revenue model:** outlines how an NPP generates income^(a):
- **Full Market exposure:** a model where revenue is generated in the open energy market and is fully exposed to volatility in demand and prices.
 - **Regulated Asset Base (“RAB”):** A model where revenue is generated over the NPPs regulated assets, ensuring a return on investment at an early phase.
 - **Contract for Difference (“CfD”):** A revenue model that guarantees a fixed capped price for electricity generated, providing stability and predictability for investors.
 - **Power Purchasing Agreements (“PPA”):** Long-term contracts between the nuclear power plant and electricity buyers, ensuring a steady revenue stream.
- Note that all models may still involve some degree of market exposure depending on their design.

3. **Delivery models:** The delivery model includes the technical design and contractual agreement between the project and the technology provider for the construction of the nuclear power plant:
- **Turn-Key:** An approach where a single contractor is responsible for the entire project, from design to construction and commissioning.
 - **Engineer, Procure, Construct (EPC):** A model where the contractor handles engineering, procurement, and construction. Another form, **multiple EPC contracts**, divides the project into separate packages, each assigned to a different contractor under its own EPC contract
 - **Joint-Delivery Model:** A collaborative approach with multiple stakeholders, sharing responsibilities and risks throughout the project lifecycle.
 - **Multi-contracting:** Under multi-contracting, construction is divided into various contractual work packages.^(b)

Project models (most common options)

 Financing model	State financing	Private financing	Vendor financing
	ECA financing	Owner-led financing	Mixed
 Delivery model	Turn-key	Multiple EPC	Multi-contracting
	EPC	Joint-delivery	
 Revenue models	Market exposure	PPA	Mixed
	RAB	CfD	

Note: (a) The Mankala model, a cooperative ownership structure, is not included as it was noted by the Amentum Third-party review that at this stage the model is unlikely to generate sufficient stakeholder interest required to support a project of this nature. (b) Note that In multiple EPC contracts, each contractor delivers a full EPC scope, whereas in multi-contracting, the project is broken into smaller, specialised work packages, often without full EPC responsibility per contract. Sources: OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; World Nuclear Association: Financing Nuclear Energy.

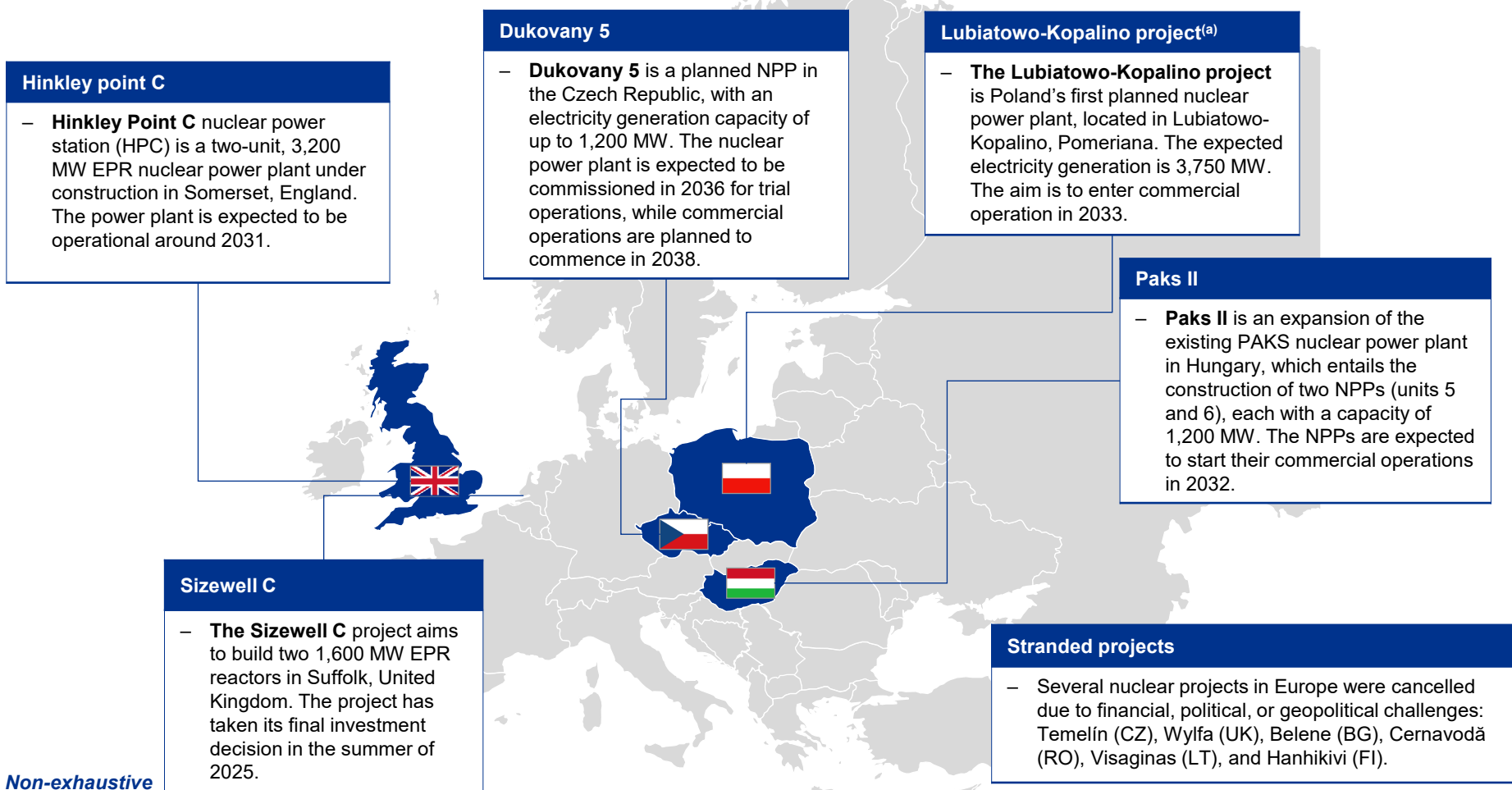


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In the past, numerous notable nuclear power plant projects have been initiated with different State support designs to mitigate the same risks



Notes: (a) The project does not have a specific name in online available sources, we will refer to it as the Lubiatowo-Kopalino project. (b) Although the original expansion of the Temelín nuclear power plant (a third and fourth reactor) was previously cancelled, the option has now potentially been revived under the contract between the Czech government and Korea Hydro & Nuclear Power.

The selected cases highlight both the evolving nature of State support and the diverse range of project models that have been employed over time

The cases provide valuable insights into the financial, political, and strategic evolution of nuclear energy projects in a rapidly changing global context

- This report examines a selection of nuclear power projects initiated or developed between 2010 and 2025—a period marked by significant shifts in political priorities, energy market dynamics, and strategic considerations.
 - During these years, the global energy landscape evolved substantially, with increasing emphasis on energy security, fluctuating electricity prices and demand, and changing public and political attitudes toward nuclear energy.
- All of the projects analysed experienced substantial cost overruns, which have had a direct impact on investor risk appetite and the overall financial viability of nuclear ventures.
 - Many of these projects required substantial State support, highlighting the evolving role of governments in enabling nuclear development.
 - The selected cases not only illustrate how the level and form of State support have changed over time but also demonstrate the variety of revenue and financing models that have been applied. In most instances, a hybrid approach proved necessary to make projects feasible.
- Despite strong policy ambitions, several European nuclear projects were cancelled before reaching financial close, highlighting the challenges of delivering large-scale infrastructure under uncertain market and geopolitical conditions.:
 - Temelín: Low power prices; no government price guarantees.
 - Wylfa: Financing deal with UK government fell through.
 - Belene: Investor uncertainty and political shifts.
 - Cernavodă: Strategic pivot away from Chinese partners.
 - Visaginas: Rejected in national referendum.
 - Hanhikivi: Cancelled due to geopolitical risks post-Ukraine invasion.
- On the following pages an overview will be provided of the different cases, their financing- and revenue models and strategic considerations.

Overview of selected cases		
Country		Case study
	Hungary	Paks II
	Czech Republic	Dukovany 5
	Poland	Lubiatowo-Kopalino
	United Kingdom	Hinkley Point C
	United Kingdom	Sizewell C
	Czech Republic	Temelín (cancelled)
	United Kingdom	Wylfa (cancelled)
	Bulgaria	Belene (cancelled)
	Romania	Cernovoda (cancelled)
	Lithuania	Visaginas (cancelled)
	Finland	Hanhikivi (cancelled)

Paks II highlights the geopolitical nature of nuclear projects and shows that revenue support is not necessarily required in fully State-financed cases

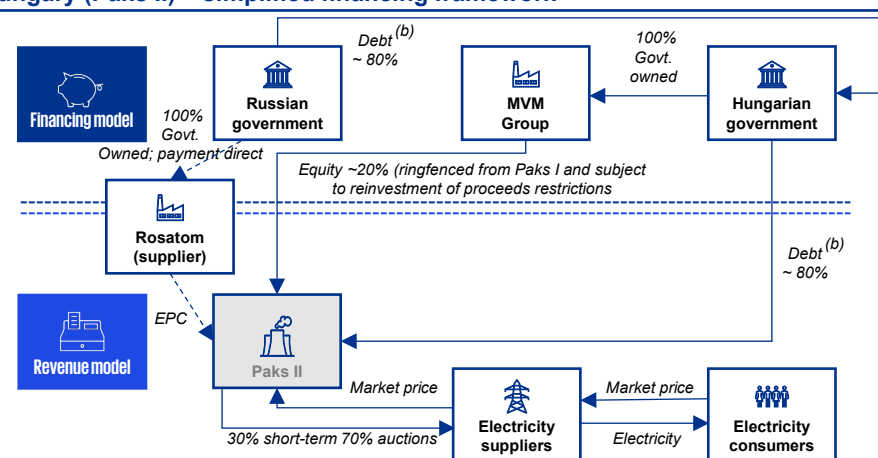
The Paks II project has limited government support as no private investors are included in its structure

- **Paks II** is an expansion of the existing PAKS nuclear power plant in Hungary, which entails the construction of two NPPs (units 5 and 6), each with a capacity of 1,200 MW. The NPPs are expected to start their commercial operations in 2032.¹
- The NPP will be developed by (“*MVM Group*”), which is wholly owned by the Hungarian government. *MVM Paks II Nuclear Power Plant Development Private Company Ltd.* and occurred via an EPC contract with JSC NIAEP^(a), a Russian SOE for a total value of EUR 12,5 billion.
 - **Financing Model:**
 - State financing: Paks II was financed based on an Intergovernmental Agreement (IGA) between the Russian Federation and Hungary. Within the IGA, Russia – via the Vnesheconombank^(b) - provides Hungary with a State loan in the form of a revolving credit facility covering 80% of the EPC contract with rates between 3,95% and 4,95%. The remaining 20% of the EPC contract is paid by Hungary.
- **Revenue Model:**
 - The Hungarian State envisages that the electricity generated by Paks II will be sold on the market in accordance with typical market-based sales agreements.
 - At least 30% of its total electricity output will be sold on the day-ahead, intraday and future market via the Hungarian Power Exchange (“HUPX”). The rest of its electricity output will be sold on objective, transparent and non-discriminatory terms by way of auctions. These characteristics are deemed of great importance to the EC to prevent that the electricity produced by Paks II (or any other NPP) can be monopolised in long term contracts posing risks to market liquidity.

Strategic considerations

- Paks II highlights the geopolitical implications of NPP projects. The project has benefited from the geopolitical dynamic at present. The project is funded through “support” from Russia, but it is unofficial support and not part of EU State aid.
- In September 2025, the European Court of Justice (ECJ) concluded that the EC's State Aid assessment for the Paks II project failed to adequately justify compliance with EU procurement rules, specifically regarding the direct award of the construction contract to Rosatom without a public tender. The decision highlights the rising influence of geopolitical dynamics in Nuclear New build programmes.
- The revenue model of Paks II explicitly shows how a NPP only requires an extensive revenue support model (such as a CfD in the case of Dukovany) if private investors are exposed to revenue risk of the project for their return. If the development of the NPP is fully in the hands of publicly backed host country parties, no revenue support is necessary. All together, the Paks II case underlines that a GSP can be limited if no private investors are incorporated in the project.

Hungary (Paks II) – simplified financing framework



Notes: (a) Joint-Stock Company Nizhny Novgorod Engineering Company Atomenergoproekt, A Russian State Owned Enterprise; (b) The Bank for Development and Foreign Economic Affairs of Russia; (b) The intergovernmental agreement loan between Russia and Hungary is State-to-State, so the full loan flows through the Hungarian State not as debt to the project company, even if funding releases are directed to the project company. Sources: (1) World Nuclear Association: Nuclear Power in Hungary; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

Dukovany 5 relies largely on public financing, whilst leveraging on the experience of ČEZ as operator

Dukovany 5 relies heavily on State financing

- **EDU II (“Dukovany 5”)** is a planned NPP in the Czech Republic, with an electricity generation capacity of up to 1,200 MW. The nuclear power plant is expected to start its commercial operations in 2038.
- The NPP will be developed by EDU II, that is created for the construction and operation of the plant. EDU II is for 80% owned by the Czech government and for 20% subsidiary by ČEZ. ČEZ is a listed company, with the Czech Republic as its majority stakeholder (+/- 70% of shareholder rights).¹ KHNP has been selected to build two APR-1000 units at a project cost of approximately EUR 15.8 billion.³
 - **Financing Model:**
 - State financing: The Czech State will provide a major portion of its financing through State-financed debt (98%).² During construction, the Czech State charges 0% interest. Whilst the interest rate, during operations, will be based on the Czech State debt costs for the given year² plus 1 percentage point.
 - Owner-led financing: The remaining 2% of the capital structure is covered by an equity investment from the Czech State and ČEZ. This contribution primarily covered the preparatory phase, including the establishment of the project organisation and early-stage development activities. Additionally, ČEZ will provide EUR 1.77 billion^(a) in committed contingent equity to cover potential cost overruns. This structure is designed to incentivise ČEZ to control and minimise such overruns, while also ensuring that ČEZ bears the primary financial risk. Any further cost overruns beyond this amount will be covered by the Czech State.
- **Revenue Model:**
 - EDU II will supply all its power generated to a SPV, fully owned by the Czech State (“Supply SPV”), via a Purchasing Contract (“PC”) of 40 years, after which it will have direct market exposure. The purchasing price within the PC is defined based on a formula which has similar effect as a two-way CfD², providing a minimum price, whilst including an upward limit for EDU II. Via this structure, the State provides maximised revenue support to EDU II.
 - The Supply SPV will sell 70% of EDU II’s electricity output on the day-ahead, intraday and future market, whilst 30% will be sold via transparent auctions.

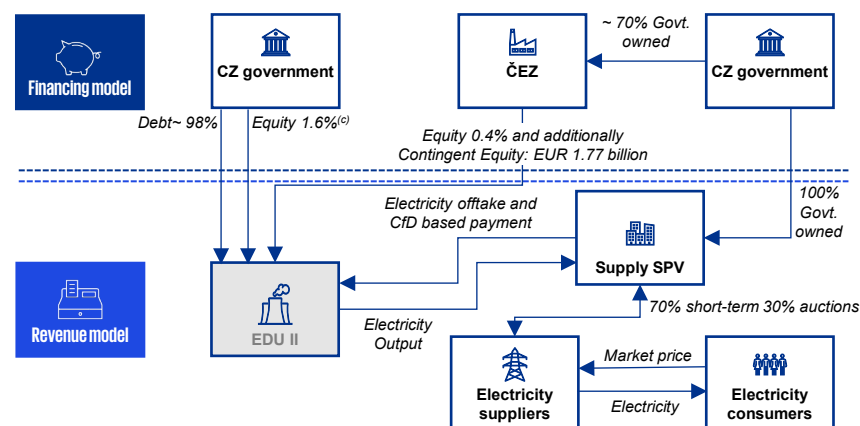
– Risk/gain sharing mechanism:

- The Czech State applies risk/gain sharing mechanism which shares any gains above [9 to 11% RoE] in a 50:50 basis between EDU II and the Supply SPV in the first 40 years, and 60:40 in the ensuing 20 years.^(b)

Strategic considerations

- In the Dukovany case a First Implementing Contract was closed between the State, ČEZ and EDU II wherein the fundamental interests of the State are safeguarded. The project initially followed a competitive tender involving KHNP, EDF, and Westinghouse. The technology selection led to challenges from EDF and Westinghouse which now are understood to have been dropped.
- The ability to (partially) expose private investors (via equity contributions) to cost-overruns is the result of the strong financial position of ČEZ, and the revenue support provided by the Czech State. Further financing contributions (in the form of either equity or debt) from ČEZ would (likely) lead to an increase in ČEZ’s gearing (% of debt capitalisation) which may negatively impact its credit rating.
- In the Dutch context there is no entity which will bear similar risks.

Czech Republic (Dukovany 5) – simplified financing framework



Notes: (a) The cap of EUR 1.77 billion has been the result of commercial negotiations between the involved parties; (b) The returns of the project will be assessed at 5-year intervals after CoD;

Sources: (1) World Nuclear Association: Nuclear Power in Czech Republic; (2) EC Decision SA.58207; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; (3) World Nuclear Association: KHNP sets out plan for USD 18.6B Czech Nuclear project.

Lubiatowo-Kopalino introduces large scale involvement of ECA financing in the project structure

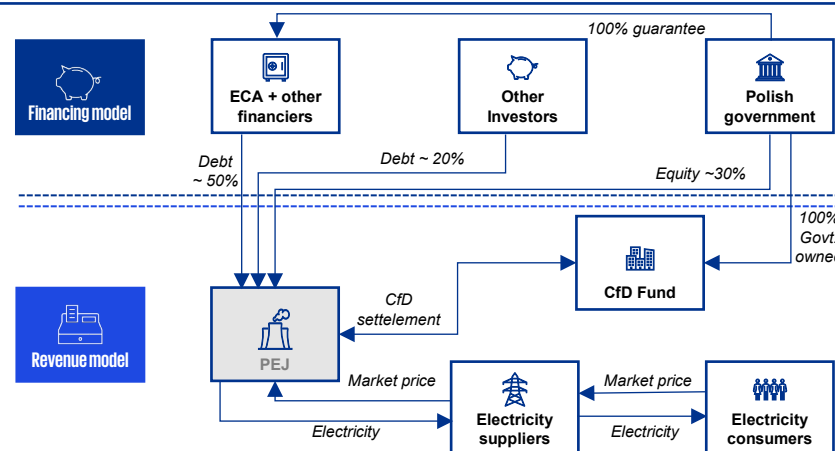
The Lubiatowo-Kopalino project leverages on ECA financing

- **The Lubiatowo-Kopalino project** refers to Poland's plan to develop three III+ generation NPPs, located in Lubiatowo-Kopalino. The expected electricity generation of the project is 3,750 MW. Commercial operation is foreseen for 2036.
- The NPP will be developed by Polskie Elektrownie Jądrowe sp. z o.o ("PEJ"), a 100% State-owned investment vehicle established for the purpose of nuclear energy deployment in Poland. In December 2022 it signed a cooperation agreement with Westinghouse for the delivery of the NPPs. Poland and the U.S. already had an Intergovernmental Agreement ("IGA") on civil nuclear cooperation, signed in 2020¹. The total EPC costs are estimated at EUR 45 billion.
- **Financing Model:**
 - State financing: Poland will provide 30% of the investment costs in equity.
 - ECA financing: a consortium of ECAs are expected to provide 50% of the investment costs. The Polish State has secured Letters of Intent's ("LoI") of:
 - the United States for EUR 17,5 billion, France for EUR 3,5 billion and Canada for EUR 1,4 billion². The ECA financing will be secured via a 100% guarantee from the Polish State against no guarantee fee.
 - Private financing: The remaining 20% is foreseen from Polish and foreign investors in the form of debt financing and 100% guaranteed by the State.
 - In case of cost overruns PEJ will first attempt to obtain additional financing from ECAs, with the back-up option for equity contributions from the State.
 - If the sought amounts are not realised, the Polish government will cover the funding gap.
- **Revenue Model:**
 - PEJ will be selling the produced electricity either via PPA auctions or through organised markets. Additionally, PEJ will be the beneficiary of a two-way CfD with a duration of 60 years. Its revenue will accordingly be the sum of its market revenues and the difference (settlement) payments under the CfD.
 - The counterparty of the CfD will be a 100% State-owned dedicated CfD fund²

Strategic considerations

- The EC has not yet decided on the proposed State aid measures submitted by the Polish government. In this light, challenges to the proposed measures have been identified, such as the tenor of the CfD (60 years), which is considerably longer than the applicable tenor for Dukovany (40 years). In this light other challenges may arise that may lead to adaption of the State support package.^(c)
- The Polish project limits the cash outflow from the Polish government to a 30% equity stake, whilst leveraging on ECA's and private investors to provide 70% of the project's investment. To activate these parties, the Polish State provides a GSP including a 100% guarantee to ECAs, minimising their exposure to the NPP, and a CfD mechanism, securing returns for investors.
- All together, the Polish case underlines that a GSP may mobilise (private) capital for a complex project, such as an NPP, if the underlying GSP provides sufficient risk mitigation for the involved investors.

Poland (Lubiatowo-Kopalino project) – simplified envisaged financing framework



Notes: (a) Based on footnote 41 of the EC's invitation for comments on SA.109707 (b) provided via U.S. EXIM and the American International Development Finance Corporation - BPIFrance and Société de Financement Local ("SFIL") - Export Development Canada ("EDC"). (c) In September 2024, Poland notified the Commission of its plan to support State-owned company Polskie Elektrownie Jądrowe sp. z, the EC is currently investigating the aid package. Sources: (1) U.S. Department of State: Agreement to Advance American Civil Nuclear Deal in Poland. (2) EUR-Lex STATE AID – MEMBER STATE – State aid SA.109707 (2024/C) (ex 2024/N); EC Decision SA.109707.

Hinkley Point C underlines how private financing may become more available closer to COD

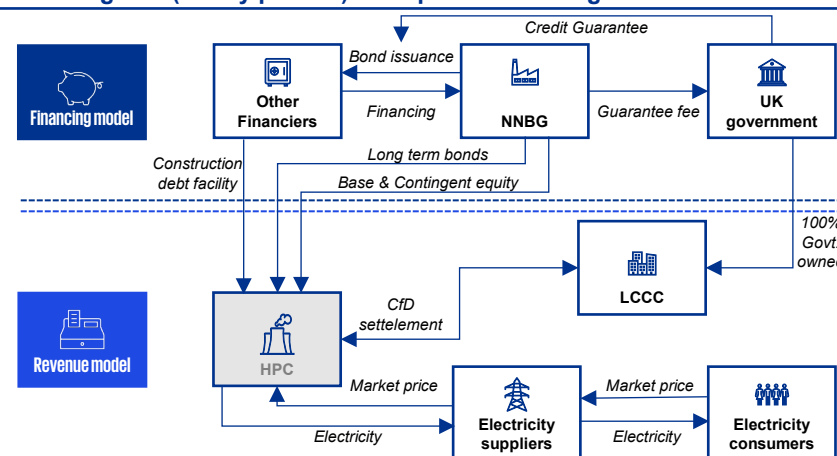
The financing and revenue models for Hinkley Point C and Sizewell C differ significantly from one another

- **Hinkley Point C** nuclear power station (“HPC”) is a two-unit, 3,200 MW EPR nuclear power plant under construction in Somerset, England. The power plant is expected to be operational around 2030¹.
- The NPP is being developed and operated through the project company Nuclear New Build Generation (“NNBG”). NNBG is owned by EDF (66.5%) and by China General Nuclear Power Group (“CGN”) (33.5%)^(a). EDF has been selected as the technology provider for the GBP 34 billion project^(b). While NNBG was originally owned by EDF and CGN at the time of the investment decision, CGN halted its financing in 2023 pursuant to its rights under the SHA^(c) to a capped exposure.²
- **Financing model:**
 - Owner-led financing: HPC is financed by NNBG via various debt and equity instruments: (1) Base Equity; (2) Contingent Equity; and (3) debt financing. The latter was back-to-back secured via a guarantee provided by the UK in return for a guarantee fee. This guarantee was never used.
 - Private financing: Apollo Global Management has committed GBP 4.5 billion in debt financing in support of the completion of HPC in 2025. Underlining that private capital becomes more attainable closer to COD.
- **Revenue Model:**
 - HPC includes a CfD in order to mitigate electricity market price risks by providing price certainty over the first 35 years of operation. For HPC, EDF and the UK government agreed on a strike price of GBP 92.50/MWh (inflation indexed). The CfD is administered by a government-owned counterparty, the Low Carbon Contracts Company (LCCC).
 - The UK provides investors to NNBG’s compensation should the government decide to shut down HPC on political grounds.
- **Risk/gain sharing mechanism:**
 - The UK applies a gain sharing mechanism between NNBG and LCCC for any gains realised with regards to the construction and a RoE threshold.

Strategic considerations

- HPC is the only project, of the ones discussed so far, that has received State Aid approval, reached financial close (FC) and begun construction. Reflecting on how the State measures have materialised we note that:
 - The Credit Guarantee by the UK government has not been utilised. Both CGN and EDF, through government support from their respective countries, were able to source cheaper finance.
 - Both CGN and EDF, via NNBG, are exposed to a large amount of construction cost overrun risks, via their Base- and Contingent equity. Accordingly, cost overruns directly (negatively) impact their Internal Rate of Return (“IRR”).
 - The complexity of external equity financing is illustrated by the impact that extensive cost overruns had on the withdrawal of CGN from the project, as its commercially agreed capped exposure was reached.
- The lessons from HPC, whereas the vendors (albeit State backed) were exposed to cost overrun risks, has led to a more risk averse position among vendors.

United Kingdom (Hinkly point C) – simplified financing framework



Notes: (a) At the time of the final investment decision. (b) GBP 31-34 billion in 2015 prices (c) Shareholder Agreement

Sources: (1) World Nuclear Association: EDF announces Hinkley Point C delay and rise in project cost; (2) Bloomberg: China's CGN Halts Funding for UK's Hinkley Nuclear Plant; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

Sizewell C provides additional insights on the Regulated Asset Base model to finance NPPs

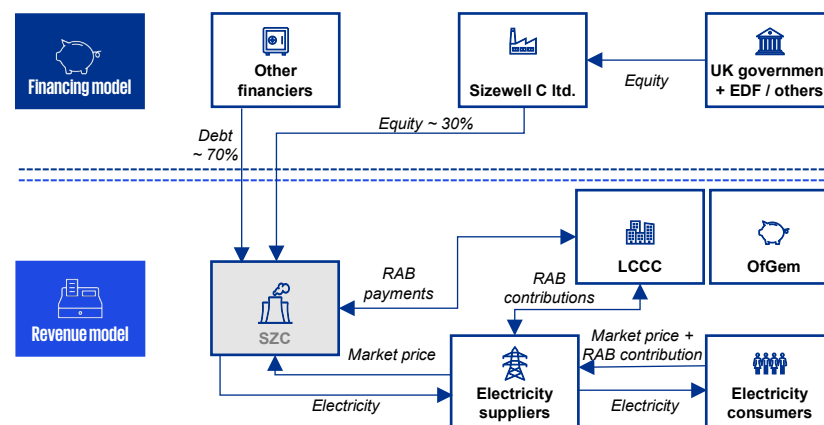
The financing and revenue models for Hinkley Point C and Sizewell C differ significantly from one another

- **The Sizewell C** project aims to build two 1,600 MW EPR reactors in Suffolk, UK. The project reached its FID in July 2025, whilst operational date remains unclear.
- The NPP will be developed and operated through the project company Sizewell C Limited (“SZC”). SZC will be developed by EDF, who owns 12.5%, whilst the UK government owns 44.9%^(a). The project is expected to cost GBP 38 billion^(a).
 - **Financing Model:**
 - The total financing of the project is foreseen at GBP 50 billion, consisting of GBP 41.6 billion in debt and the rest in Equity, leading to an 83% debt-to-equity ratio.
 - The equity is to be provided by the State (45%), and the rest from EDF and other private investors, such as Amber Infrastructure. The debt is to be financed by the National Wealth Fund (NWF) and ECA insured (by France) private bank funding of GBP 5 billion.
 - **Revenue Model:**
 - SZC applies a RAB model which allows the LCCC to collect charges from electricity suppliers (who in turn pass these costs on to end-users), as a compensation for the investments activated in SZC’s regulated asset base. Ofgem^(b) sets these charges that ensure steady revenue for investors throughout the project’s lifetime. Additionally, Ofgem decides which costs can be activated. By doing so, an incentive is set to minimise cost overruns.
 - Equity and debt investors fund the baseline project costs, including risk contingencies, over which they receive a return. Cost overruns (up until a *funding cap*) will differentiate between a share included in the asset base (funded by both debt and equity and generating a return) and a share not included in the asset base (provided by equity against no return).
 - Additional costs above the *funding cap* can be covered via additional equity investments, adjusted revenue as well as an additional GSP.

Strategic considerations

- The inability of the designed CfD model (see HPC) to raise private capital during the construction period, led to the UK decision to apply a RAB for SZC.
- Additionally, the UK considered a value-for-money argument that the RAB should mean lower cost of capital (see subsection: *Option Analysis*). The RAB model enhances the willingness of (private) investors to fund a project during construction. However, it is worth noting that the RAB model is complex and its applicability for a complex asset like a NPP is yet unproven.
- Despite the interest in the UK, it is worth noting that setting up the regulatory framework for SZC has been an extensive process covering multiple years:
 - July 2019: Government consultation on using RAB for NPPs;
 - 2019-2022: Policy developments, stakeholder engagement, and legislative drafting in advance of the Nuclear Energy (Financing) Act;
 - Post 2022: Additional regulatory steps to tailor the model specifically for SZC

United Kingdom (Sizewell C) – simplified (expected) financing framework



Notes: (a) [Final Investment Decision reached for Sizewell C – the biggest British clean energy project in a generation - Sizewell C](#) (b) The level of the levy charges is to be calculated by the Office for Electricity and Gas Markets (Ofgem), in line with the terms of the license. Ofgem will publish economic guidance to demonstrate how they will go about calculating the revenue. Sources: Sizewell C; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; Amertum Third Party Review; “A first look at the Sizewell C financing: [A first look at the Sizewell C financing – Simon Taylor’s Blog](#)”

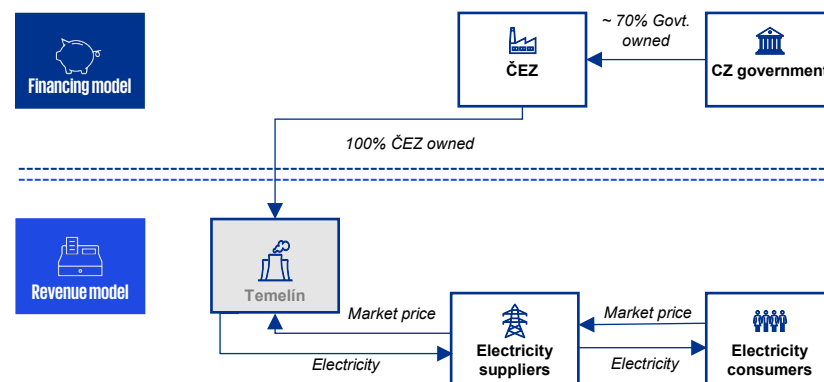
In 2014 ČEZ cancelled the Temelín expansion due to the Czech government's refusal to provide financial support to the project

Prior to the EDU II project in Dukovany the Czech Republic pursued (and cancelled) the expansion of the Temelín nuclear power plant

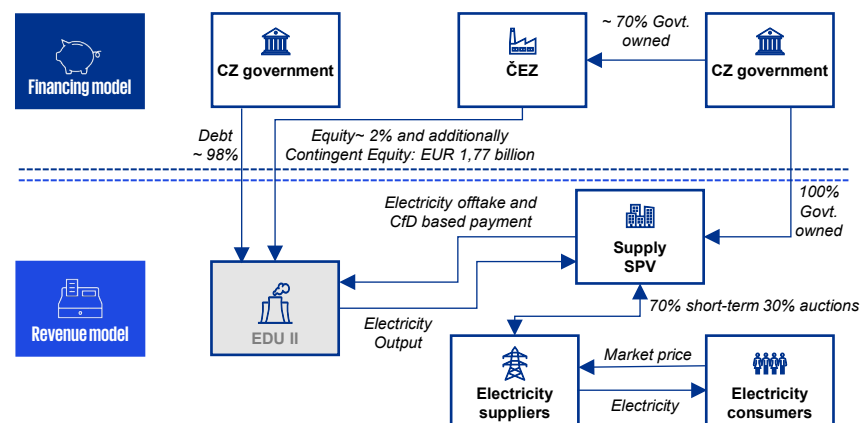
- **The Temelín project** was a planned expansion of the current Temelín nuclear power plant (by ČEZ) in the Czech Republic. The expansion was cancelled prior to the current Dukovany EDU II project.
- The cancellation of the Temelín nuclear power plant expansion in 2014 was primarily driven by economic and political factors.
 - At the heart of the issue was the Czech government's refusal to provide price guarantees for the electricity that would be generated by the new reactors or change of law protections. Without a mechanism like a contract-for-difference to ensure stable returns, the project became financially unviable for ČEZ, the State-controlled utility.
 - This was compounded by a sharp decline in electricity market prices, which significantly reduced the expected profitability of the investment. The lack of a clear and supportive policy framework for nuclear energy at the EU level further added to investor uncertainty.
 - ČEZ ultimately reassessed its strategy, concluding that without stronger State involvement and clearer regulatory support, the risks outweighed the benefits. The Dukovany project, which followed Temelín, included such protections—making it more attractive to ČEZ.
 - The Temelín project highlighted the need for substantial State involvement in the development of a viable Business Case for private parties aspiring to develop Newbuild NPPs.
- **The Dukovany EDU II project**, now under development, represents the Czech Republic's renewed effort to expand its nuclear capacity with significant State involvement compared to the Temelín project.
- Two additional units at the Temelín Nuclear Power Plant are under consideration. According to KHNP, “should the Czech government decide within the next three years to move forward with Temelín Units 3 and 4, KHNP would be eligible to enter into further contracts with EDU II following additional negotiations.”¹

Sources: (1) World Nuclear Association: KHNP sets KHNP sets out plans for USD18.6bn Czech nuclear project; World Nuclear Association: Nuclear Power in Czech Republic; Power Technology: CEZ scraps Temelin nuclear power plant expansion tender.

Czech Republic (Temelín, 2014) – simplified financing framework



Czech Republic (Dukovany 5) – simplified financing framework



The key findings of the presented cases is that financing- and revenue model choices are shaped by each country's national context

Key drivers of financing- and revenue model choices

1. National and Industrial Context

- Financing models are tied to policy-, regulatory-, and industrial environment.
- For example, The UK's use of the RAB model is the result of the successful application of the model in the Thames Tideway Tunnel. This project triggered a wave of RAB based projects in the water, hydrogen and nuclear sectors.
- The application of large-scale State financing in Dukovany is (partially) driven by the emphasis on affordability (low LCOE), as the low interest financing limits the costs of capital. This impact is furthermore strengthened by the 0% interest rate applied during construction.

2. Project Maturity and urgency

- Proven designs lead to reduced risk premiums by investors. First-of-a-kind (FOAK) projects often require more public support due to higher perceived risks and larger contingencies / uncertainties in Capex.
- Countries with urgent energy needs, consider speedy access to financing key, and may refrain from the complex process of mobilising private capital.
 - The Dukovany project illustrates a relatively straightforward financing model, whereas the UK's approach—though more complex—enables greater mobilisation of private capital

3. Availability of cheap public financing

- Countries with access to low-cost sovereign borrowing can afford to take on more upfront risk or provide cheaper State-backed loans.

4. Political and Public Acceptability

- The model must align with political drivers, such as government agreements and policy goals, which influence the implementation of such projects. For example, affordability for consumers and transparency in public spending.
- The EC's Electricity Market Reform assumes a CfD as preferred measure for supporting the development of (renewable) energy projects.

Project structures of case studies		
Model	Option	Project
Financing 	State financing	   ¹  ² 
	ECA financing	 ² 
	Private financing	 ² 
	Owner-led financing	¹ 
	Vendor financing	 ¹  ² 
Revenue 	RAB	² 
	CfD	  ¹ 
	PPA	 
Delivery 	Turn-key	
	EPC	
	Multi-EPC	
	Joint-delivery	
	Multi-contracting	

Key: Paks II  Dukovany  PEJ project  HPC ¹  Sizewell C ² 

Sources: OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; World Nuclear Association: Financing Nuclear Energy.

State aid considerations: Lessons from other European nuclear projects

State aid considerations

- The European Commission's evaluation of State aid cases under Article 107(3)(c) TFEU—as seen in projects like Dukovany, Sizewell C, Hinkley Point C, Paks II, and Lubiato-Kopalino—follows a structured assessment across four key criteria: objective of common interest, necessity and market failure, proportionality, and minimising market distortion.
 - First, the objective of **common interest** is consistently recognised in these cases, with the Commission affirming that nuclear energy projects contribute to EU-wide goals such as energy security, decarbonisation, and diversification of energy sources. These projects are seen as instrumental in achieving climate neutrality and reducing reliance on fossil fuels, aligning with broader EU strategies like REPowerEU.
 - Second, the **necessity and market failure** criterion is addressed by demonstrating that nuclear projects face unique financing challenges—high capital intensity, long development timelines, and significant regulatory risks—that deter private investment. The Commission acknowledges that without State support mechanisms such as Contracts for Difference (CfDs), equity injections, or guarantees, these projects would likely not proceed, thereby validating the need for intervention.
 - Third, the **proportionality of aid** is tested through financial modelling and scenario analysis. The Commission ensures that aid is limited to the extent necessary to close the funding gap and avoids overcompensation. Measures such as capped returns, clawback mechanisms, and shared gains are used to ensure that the aid is proportionate to the risks borne by investors.
 - Finally, the Commission evaluates whether the aid **minimises distortion of competition**. This involves assessing the governance structure of the beneficiary, ensuring legal and operational separation from other market participants, and verifying that the aid does not unduly favor one entity over others. In addition, the Commission considers the trading strategy of the nuclear power plant (NPP), particularly whether its inclusion in the generation stack could crowd out renewable energy sources. It also examines the NPP's influence on forward market liquidity and overall market dynamics.

- The first two criteria of Article 107(3)(c) are typically well established and accepted by the Commission. However, the case studies show that the EC places particular emphasis on the evidence supporting the proportionality of the aid and the steps taken to **minimise market distortions**. The following sections summarise the EC's main findings and key takeaways on these aspects.

Lessons learned on proportionality

- Across all cases, the EC's assessment of **proportionality** focused on ensuring that State support was strictly limited to what was necessary to make the projects viable, without providing undue financial advantage to the beneficiaries.
- However, it is important to note that there is a high degree of variation across these State aid cases, which can be partly explained by evolving market conditions throughout the time. This context helps clarify why proportionality assessments may differ and why tailored approaches have been necessary.
 - **Hinkley Point C:** The EC required the UK to revise its equity gain-share mechanism by extending its applicability to the entire operational life of the project—not just the Contract for Difference (CfD) period—and by increasing the proportion of gains shared with the State. Additionally, the UK's proposed credit guarantee fee was raised to better reflect market conditions.
 - **Dukovany:** The EC mandated a reduction in the duration of price support from 60 to 40 years. It also required the implementation of a two-way CfD with ex-post settlements and a claw-back mechanism to return excess profits to the State (over the lifespan of the project). These adjustments were calibrated using a discounted cash flow model to ensure that aid was confined to the funding gap and that the shareholder (ČEZ) received a market-based return.
 - **Paks II:** The EC examined whether full State financing—via a Russian loan and Hungarian equity—was proportionate. It compared the project's expected IRR to a market-based WACC, concluding that the project would not be viable without State support. However, the EC required that any profits exceeding what was necessary for viability be returned to the State and prohibited Paks II from reinvesting in new capacity without further State aid approval. Additionally, The EC required the separation of PAKS II and its holding company MVM to ensure PAKS II sells its power on a transparent and market basis.

State aid considerations: Ensuring proportionality and market integrity in State aid

Lessons learned on proportionality (continued)

- **Lubiatowo-Kopalino:** While a final decision is pending, the EC has expressed preliminary concerns about the proposed aid package. These include the 60-year CfD, 100% State guarantees on debt, and a substantial equity injection. The EC questioned the proportionality of this support, particularly due to the long duration, absence of a guarantee fee, and broad coverage of exchange rate and operational risks.
- Across all cases, the EC identified key concerns: the risk of overcompensation, the need to calibrate aid to the minimum required, the importance of safeguards—such as clawbacks, benchmarking, and transparent market participation—to prevent unjustified advantages for project companies and the need for the project to follow market signals in its trading strategy.

Lessons learned on market distortion

- The EC has consistently assessed market distortion risks through the lenses of legal separation, trading transparency, and beneficiary selection.
- **Hinkley Point C:** The beneficiary, NNBG, is a subsidiary of EDF Energy, which is itself a vertically integrated energy company.
 - The EC required to implement trading transparency commitments. NNBG, which is a subsidiary of EDF Energy, must record and price all trades for Hinkley output at market rates, keep separate books, and report annually to the CfD counterparty (LCCC) and the EC, to mitigate risks of market manipulation.
- **Dukovany:** The beneficiary is EDU II, a wholly owned subsidiary of ČEZ, which is majority State-owned but also publicly listed.

- The EC required clear legal and financial separation between EDU II and ČEZ, with independent management and a ban on the transfer of shares or property to the ČEZ Group.
- To address market power concerns, the EC required that at least 70% of EDU II's output be sold on day-ahead, intraday, and futures markets, with the remainder sold via transparent, non-discriminatory auctions, all under regulatory oversight.
- The selection of ČEZ as project promoter was not preceded by a public tender, but was justified by the company's unique experience, ownership of the site, and advanced project development, which would have made alternative promoters significantly less efficient and more costly. The EC ultimately accepted this rationale, noting that no third party raised objections and that the governance structure and trading commitment, in the form of a supply SPV, who sells the power produced by EDU II onto the market, would mitigate risks of market concentration and manipulation.
- **PAKS II:** the beneficiary is Paks II, a 100% State-owned company, legally and structurally separated from the MVM Group (the incumbent State-owned utility).
 - The EC required Hungary to ensure that PAKS II, its successors, and affiliates are fully legally and structurally separated from MVM and other State-controlled companies, with independent management and no shared directorships or information exchange.
 - PAKS II's trading strategy must be arms-length and profit-optimising, with at least 30% of output sold on the Hungarian Power Exchange (HUPX) and the remainder via transparent, non-discriminatory auctions overseen by the energy regulator.
 - The selection of PAKS II as beneficiary was not the result of a competitive process but was justified by the State's direct control and the absence of credible alternative operators at the time. The EC accepted this, provided that profits from PAKS II are either paid as dividends to the State or used only for the defined project, and that any reinvestment –by PAKS II in new capacity- would require separate State aid approval.

Key findings of the State aid cases relate to the EC's scrutiny on proportionality of the aid and minimising market distortion

Key lessons for the Dutch Nuclear Newbuild Programme

1. Proportionality and avoiding overcompensation

- The EC places strong emphasis on ensuring that State support is strictly limited to what is necessary to close the funding gap, especially when private capital is involved. It is essential to calibrate the GSP so that mechanisms such as clawbacks, capped returns, and profit-sharing are embedded to prevent windfall profits or long-term excess returns and align with market standards.
- **Action Point:** Develop further the Financial Model and Business Case that transparently demonstrate the minimum required support and include safeguards against overcompensation.

2. Market transparency and trading strategy

- The GSP must be designed to support market transparency and liquidity of energy markets, avoiding displacement of renewables and market manipulation. The project should commit to selling a significant share of output on organised markets and through non-discriminatory auctions, in line with EC expectations.
- **Action Point:** Define and document a trading strategy that ensures transparency, supports market liquidity, and is compatible with Dutch market structures.

3. Legal and operational separation

- The EC requires clear legal and operational separation from incumbent utilities, independent governance, and restrictions on reinvestment or expansion without further EC approval. For the Dutch SOE, governance structures must be robust, with clear separation from existing market participants and transparent reporting lines.
- **Action Point:** Review and, if necessary, strengthen the governance and legal structure of the SOE to ensure compliance with EC requirements.

Key lessons for the Dutch Nuclear Newbuild Programme (continued)

4. CfD design and revenue support mechanisms

- The EC has expressed its preference for two-way CfDs for revenue support, but its design must avoid market distortions and overcompensation. CfD design, such as: strike price, duration, and volume carve-outs (e.g., for PPAs) should be carefully calibrated to Dutch market conditions and EC guidelines.
- **Action Point:** Engage with EC and market stakeholders to refine CfD design, ensuring it is both effective and compliant.

5. Ongoing stakeholder engagement and Business Case / scenario refinement

- The Dutch context is characterised by evolving market conditions, political priorities, and project fundamentals (e.g., site- and technology selection). Continuous dialogue with EC, market participants, and internal stakeholders is critical to anticipate and address potential risks.
- **Action Point:** Establish a structured process for scenario refinement and stakeholder engagement, ensuring the GSP remains responsive and robust to changing circumstances.

Chapter

Management Summary

Introduction

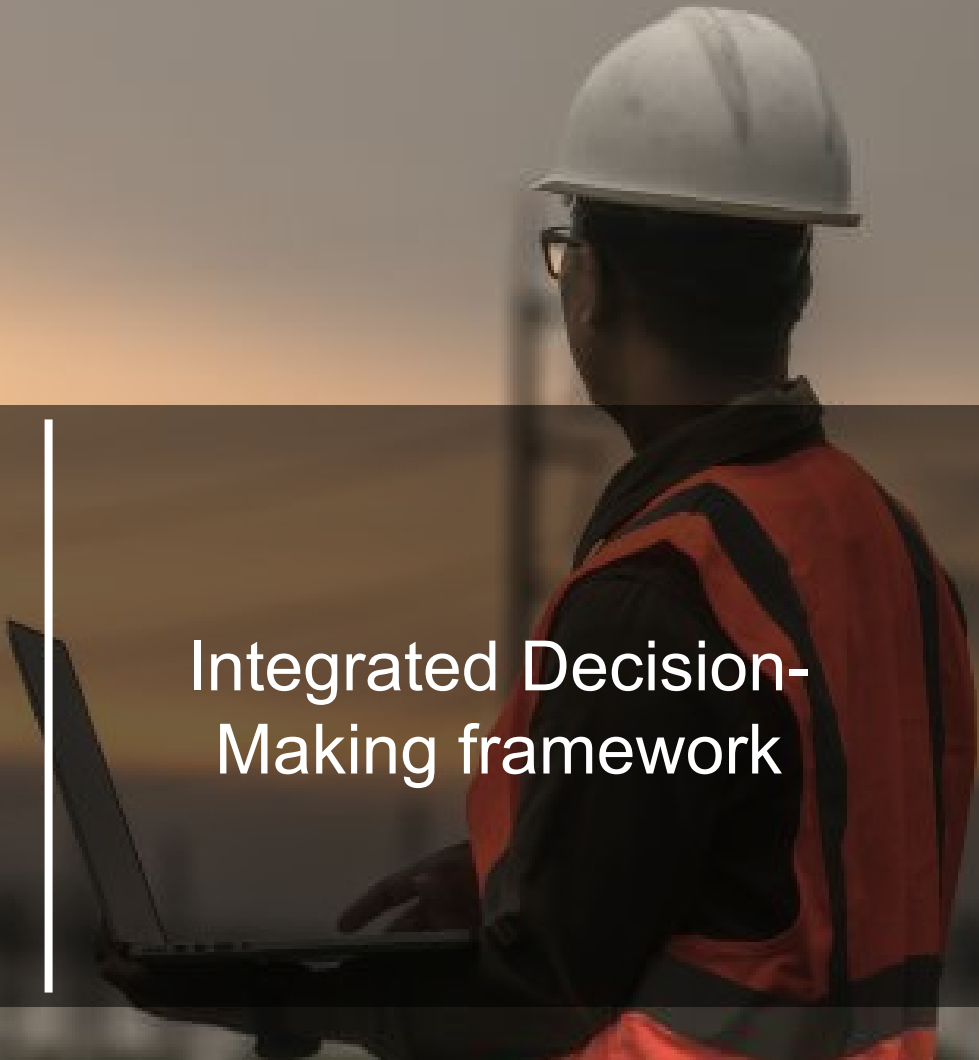
Precedent NPP models used in Europe

Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

A person wearing a white hard hat and a high-visibility orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn.

Integrated Decision-Making framework

A Decision-Making Framework is needed to support a structured and information driven decision on the GSP

A DMF is set up to assist in the assessment of trade-offs in light of the preferences and constraints of the Dutch State

- The **DMF** provides a structured set of criteria for evaluating various project models, such as financing models, delivery mechanisms, revenue models, and GSP options.
- Each model and support option is assessed against the DMF criteria, weighing both its strengths and limitations. While a particular option may perform well on one criterion, it may underperform on others—highlighting the importance of a balanced evaluation.
 - Utilising a structured DMF allows for better management of trade-offs, such as between (significant) support during the construction period, in the form of interest free loans, which will minimise the necessary revenue support required during the operational period.
- This comprehensive evaluation not only provides clarity and transparency in the decision-making process but also fosters accountability by documenting the rationale behind the selected GSP option.
- Additionally, the DMF serves as a basis for engaging various stakeholders, including government ministries, private financiers, vendors, and technology providers. It ensures that all parties understand how decisions regarding the GSP are made and which criteria are most important, facilitating smoother negotiations and consensus building.

Process

- In the next chapters we will discuss the individual financing- and revenue models to highlight their key characteristics and respective (dis-)advantages. In parallel, they will be evaluated against the DMF.
- At the end of each chapter, respectively financing- and revenue models, a matrix will summarise and conclude on the main findings of the individual models.
- In a later chapter ^(a) scenarios will be drafted and assessed, by the guidance of the DMF. This comparison may lead to a ranked preference, resulting in a preferred GSP or the identification of multiple viable GSPs.

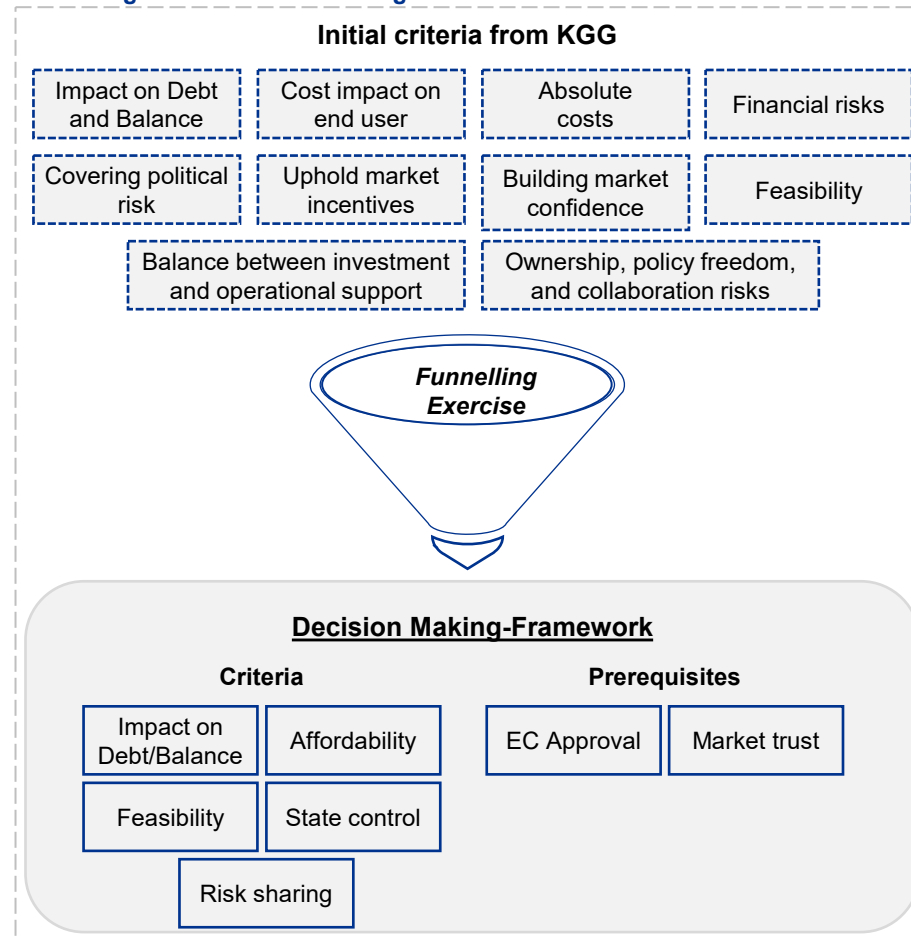
Note: (a) Please refer to chapter 'scenario drafting'.

KGG and KPMG have set up the DMF in a thorough and transparent manner including consultations with relevant stakeholders

The DMF has been derived through an iterative process between stakeholders and (inter) national experts

- Following discussions with the Ministry of Finance, KGG developed an initial framework consisting of ten parameters to guide the evaluation and selection of GSP options. KPMG reviewed this initial list and grouped related criteria to streamline the decision-making process.
- Each criterion was evaluated based on three key aspects:
 - clarity** (can the criterion be clearly defined?);
 - concreteness** (is the criterion specific and measurable?); and
 - decision-making utility** (does the criterion help differentiate between GSP options?).
- This assessment was carried out in multiple workshops involving KGG, KPMG, Etara, and, in some cases, the Ministry of Finance, to incorporate a broader perspective from the Dutch State.
- The evaluation led to the development of five criteria and two prerequisites, which guide the State's preferences when deciding on a preferred project structure and respective GSP.
 - Criteria** are defined as the principles by which the various NPP project- and GSP options can be evaluated. They are used to measure, compare, and determine the suitability of the options to the State's preference.
 - Prerequisites**, on the other hand, are conditions or requirements that must be fulfilled. These are non-negotiable and do not lead to choices between the various project- and GSP options, other than determining whether a package is acceptable or not.
- In the following chapters (financing- and revenue models), the individual financing- and revenue models will be assessed, including an assessment along the axis of the DMF.

Funnelling of the Decision-Making Framework



The defined criteria and prerequisites that need to be considered follow political policies and preferences

The country specifics and political preferences of the Netherlands lead to specific criteria and prerequisites as building blocks of the DMF

- **Impact on debt and balance:** The State budget reserved an amount for the development of two reactors which is less than the current cost estimate bandwidth for the development of the plants¹.
 - As a result, the State identifies that budgetary impact for the State of this project should be further assessed. A reduction of the State's share of project financing could lower the impact during the construction phase at the cost of increasing the required State support necessary in the operational phase.
- **Affordability:** The National Plan Energy system² prioritises maintaining affordable and stable electricity prices for end consumers while minimising societal costs (so including fiscal costs for the State) for the entire energy system.
 - The cost of capital is a substantial part of the total NPP project costs due to the capital-intensive nature and long construction period.^(a) Additional private financing, which is generally more expensive than public financing, negatively impacts the project's affordability.
- **Feasibility, State Control, and Risk Sharing:** Feasibility, State control, and risk sharing are central to the State's decision-making process.
 - The ambitious goal of completing one NPP (with two reactors) as soon as possible after 2035 underscores the need for a project structure that supports feasibility and timely completion. The government's role in guiding the energy transition highlights the importance of State control. The NPE's objective of achieving an economically viable and socially equitable energy transition emphasises the significance of risk-sharing.
- Different project options (such as public vs. private financing) influence these criteria differently, presenting a complex trade-off where enhancing one aspect may compromise another. Therefore, a well-balanced decision, that aligns with the NPE goals, and minimises financial risks is of importance. This approach ensures that strategic decisions not only conform to budgetary constraints but also honor commitments to affordability, control, feasibility and risk sharing.

Note: (a) EY noted in their report 'Dutch Nuclear New Build Program: Renumeration models & financing structures' that the cost of capital is especially high for first-of-a-kind (7-10%) and next-of-a-kind (4-7%) reactors.

Sources: (1) Kamerstukken II, 2024/25, 32 645, nr.139; (2) Rijksoverheid: Nationaal Plan Energiesysteem; Rijksoverheid: Kernenergie.

Integrated Decision-Making Framework	
Criteria	Description
Impact on debt and balance	The impact on debt and balance of the State during the construction and operational phases. This includes the efficiency that both the financing- and revenue model have on supporting the necessary investment- and operations phase, respectively.
Affordability	Affordability relates to the absolute costs of the project. This is expressed as the LCOE.
Feasibility	The feasibility and timeliness of the financing, with emphasis on the various factors determining whether the financing can be realised within a reasonable timeframe. Feasibility also covers the scalability of the project model and GSP to support additional NPPs that are foreseen after the first two reactors.
State control	The level of flexibility in which the State can control decision making in the delivery entity and act on changes in political preferences. This involves identifying the relevant stakeholders, such as ministries, private investors, and operational companies, and concerns the distribution of ownership rights and the authority to make these decisions.
Risk sharing between State, investors and vendors	The financial risks can be allocated among the State, (private) investors, and the supplier. This mainly concerns the construction- and revenue risks, and the potential deviations from the expected budget series for the State, and how these can be minimised to the greatest extent possible.
Prerequisite	Description
EC approval	The chosen structure must lead to a successful State Aid assessment by the European Commission
Market trust	The chosen structure must gain the confidence of the market and lead to successful involvement from market participants.

Chapter

Management Summary

Introduction

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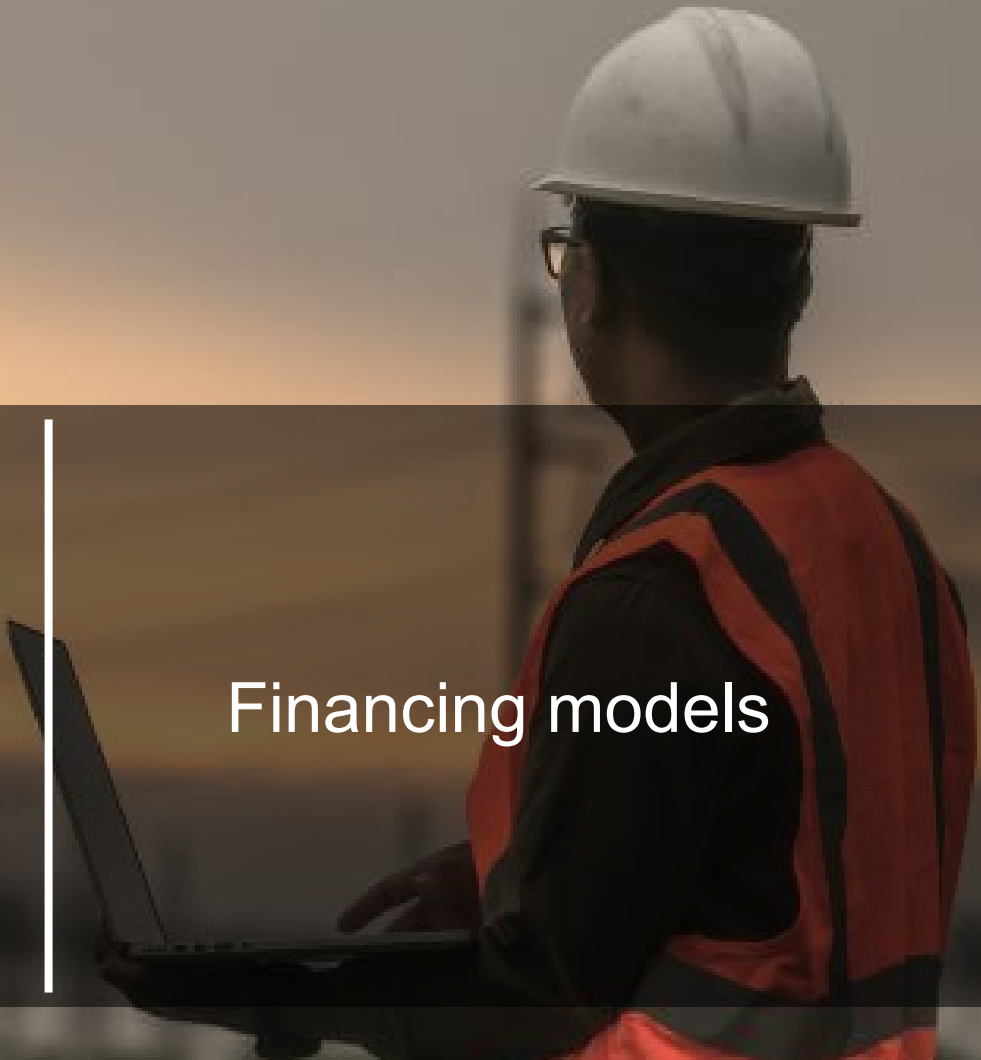
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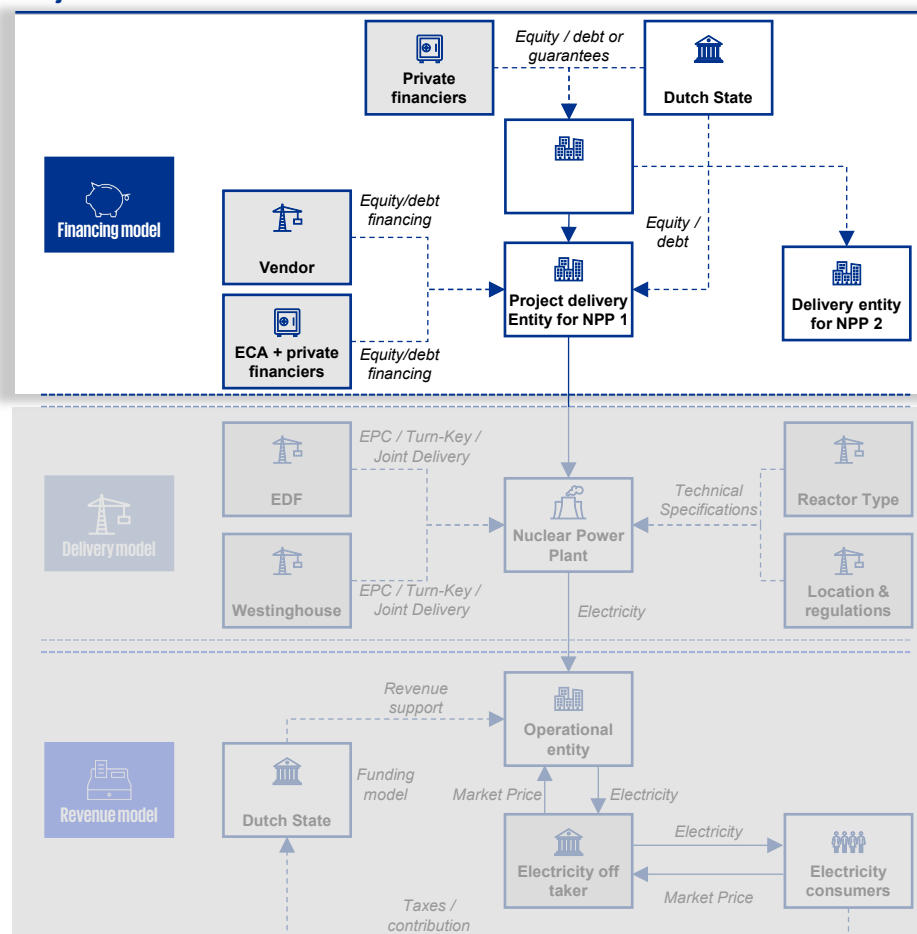
A person wearing a white hard hat and an orange high-visibility safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn, with warm orange and yellow light.

The various financing models are assessed individually to highlight their key characteristics and (dis-)advantages

Financing models for NPPs are diverse and essential for project viability

- Given the inherent risks and sizeable investments relating to NPPs, financial models and its sources require a thorough assessment in order to understand the impact of specific financing structures and sources. Key financing models^(a) assessed in this section are:
 - State financing: Government provides financial support for nuclear power plant projects via either debt or equity.
 - Export Credit Agency financing: ECAs provide financing via either direct loans or guarantees to financiers in support of local export companies.
 - Private financing: Private institutions may fund the project through equity or debt.
 - Owner-Led financing: Plant owners provide direct financing to the project.
 - Vendor financing: Equipment suppliers offer financing options to plant owners.
- Although these financing sources are assessed individually, we acknowledge that most nuclear projects rely on a combination of financing sources. Moreover, the structure may evolve over time as the project characteristics change.
- Given the significant cost overruns observed in NPP projects, it is essential to establish a clear and transparent allocation of responsibilities for covering such overruns. A common approach is to cap the financial exposure of private investors, with the State acting as the lender of last resort. Other financiers cannot bear the same risks a State may be willing to take to fulfil its country's target policies.
- Despite being vital for low-carbon energy and climate change mitigation, securing financing is challenging due to earlier mentioned characteristics of a NPP project. Investor confidence generally relies on strong governmental support.
- Private financing typically raises overall project costs, especially for capital-intensive NPPs with long construction timelines. Interest accrued during construction significantly increases capital expenditure, leading to higher LCOEs and potentially challenging project viability.

Project structure



Notes: We note that LCOE does not fully reflect the full benefit of nuclear to an energy network that is high on renewables, specifically its contribution as base load energy provider (system cost and benefits) are not reflected in LCOE; (a) The RAB revenue model, although not being an explicit financing model, also impacts the financing necessity (lowering it) by decreasing the amount of interest capitalisation.

Sources: World Nuclear Association: Financing Nuclear Energy; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

State financing ensures maximum control and low capital costs, but imposes significant financial burden and risk on the State

Financing by the Dutch State offers numerous advantages

- The Netherlands holds a high credit rating among major rating agencies, reflecting its strong economic fundamentals, fiscal discipline and investor confidence. These factors collectively contribute to the Netherlands' ability to borrow at low costs.
- The State can leverage this borrowing capacity to minimise the LCOE by offering the lowest cost of capital among potential other capital providers.
- By fully financing the project (and or the SOE), the State retains control over its strategic direction and decision making.
 - The amount of control the State has over the project depends on the governance structure of the SOE, the project delivery entity and operating entity. Depending on this structure control can be enhanced or weakened.
 - Via the State's ownership, the State aims to ensure that the project aligns with national energy policies and security interests.
- (Fully) public financing enables the project to advance with fewer stakeholders, reducing lead times associated with the extensive due diligence required by private financiers.

However, financing by the State comes with several drawbacks

- Financing the majority or entirety of the project may significantly impact the government debt and fiscal balance:
 - In this context, the current State budget allocation of EUR 14 billion for developing two NPPs as soon as possible after 2035, secured in the Climate Action Fund, is significantly lower than the current estimated cost range for the project.
 - The government assumes most financial risks, with no formal risk-sharing mechanisms involving (private) investors, except for what may be possible through the Delivery Model. As long as the State fully finances the project, this remains the only potential channel for risk-sharing—since no other party holds equity or a direct financial stake in the project.

Credit rating and borrowing rates per country per 01/01/2025¹

Country	Credit Rating	10Y GvT bond yield
Netherlands	AAA	2.74
Germany	AAA	2.50
UK	AA-	4.50
US	AA+	4.48
Czech Republic	AA-	4.05
Poland	A-	5.72
Japan	A+	1.40

Pros and cons of full financing by the Dutch State

Description	Considerations
(+) Government can leverage its borrowing capacity to minimise the LCOE by providing the cheapest cost of capital for the project	(-) Significant impact on government debt and balance, if the entire financing is borne by the State
(+) The government retains maximum control over the strategic project	(-) The government assumes most financial risks stemming from the financing model ²
(+) Project can proceed without financing constraints during the critical/vulnerable construction phase	

Source: (1) Rates retrieved from Bloomberg on 14/05/2025: 16:00.; (2) further risk sharing may be feasible, and required, via the Delivery Model of the project, irrespective of the chosen financing model.

An ECA provides support to companies that are internationally active, often in high-risk projects

ECAs support national companies in entering foreign markets by providing financial security

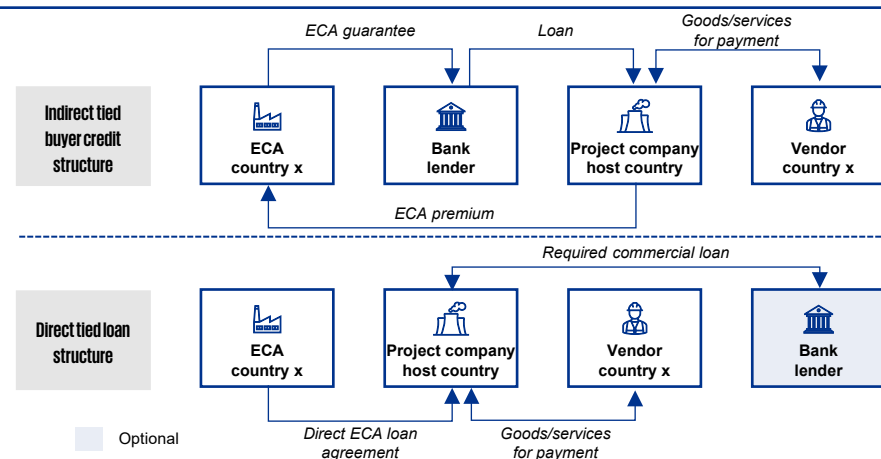
- Export credit financing refers to financing provided by States (either directly by governments or through State-owned enterprises or related entities) to promote the sale and export of products and create employment domestically.
- Many countries offer export credit financing via the establishment of government mandated export credit agencies such as:
 - Atradius Dutch State Business ("ADSB");
 - Export-Import Bank of the United States ("US EXIM");
 - Bpifrance Assurance Export ("Bpifrance");
 - Korea: Export-Import Bank of Korea ("KEXIM").^(a)

ECAs can take on different roles in financing a nuclear power plant project^(b)

- In an **indirect tied buyer credit structure**, the ECA provides a guarantee or insurance to a financing party (or a syndicate of various financing parties) which provides a loan to the project company in the import country.
 - The financing party extends credit to the buyer (importer), bearing a part of the risk via a deductible not covered by the ECA, whilst the ECA bears a large share of the risks associated with the buyer. The deductible allows the ECA to leverage on the due diligence of the financing party.
 - The loan is "tied" because it is linked to the purchase of goods or services from the ECA's home country.
- In a **direct tied loan structure**, the ECA lends money directly to the foreign buyer or borrower without a (private) financing party.
 - A direct lender will often require the project to attract financing at commercial (private) terms for a share of the project, to mimic the deductible not covered by ECA from the indirect buyer credit structure.
- ECA financing is governed by OECD rules, making it transparently priced but more costly than Dutch State capital costs. Additionally, ECAs are bound by strict content requirements minimising the quantum that can realistically be covered.^(c)

- US EXIM and KEXIM offer both indirect tied buyer credit structures and direct tied loan structures, whereas Bpifrance exclusively provides indirect tied buyer credit structures.
- ECAs that provide direct lending have an advantage over those primarily focused on indirect credit structures.
 - This mainly relates to the administrative burden that is required in the due diligence phase of an indirect structure. Due to the large volume foreseen in NPP transactions, it is likely that financing from private parties will require a large syndicate of financial institutions to fund the loan. The ECA (and project entity) will have to coordinate this complex group to secure the loan.
 - In the case of direct lending there is primarily a relation between the ECA (financier) and the project entity (borrower). As previously mentioned, direct lending ECAs may require some form of private financing at commercial terms for risk sharing purposes. These loans are often treated *pari passu*.

Examples of the possible roles of an ECA (non-exhaustive)



Notes: (a) Even though KHNP has withdrawn from the Dutch nuclear tender, Hyundai E&C may still be involved in for example a partnership with Westinghouse in other European projects where they are jointly pursuing large-scale nuclear developments. Accordingly, KEXIM could still be a relevant financing partner; (b) In general, ECAs can play various roles in financing offering credit, project finance, guarantees, etc. (c) For Sizewell C only GBP 5 billion has been covered via ECA financing. Sources: World Nuclear Association: Financing Nuclear Energy; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; US EXIM.

Various nuclear energy projects are partially financed by ECAs

Several nuclear power plant projects include ECA's in the financing structure^(a)

- **The Barakah Nuclear Power Plant** is an active nuclear plant located in Al Dhafra, Abu Dhabi, UAE. At financial close, KEXIM extended a financial package totalling USD 2.5 billion in the form of a direct loan agreement.¹ In 2023, the KEXIM facilities were fully refinanced and repaid through a commercial loan provided by First Abu Dhabi Bank (FAB) and Abu Dhabi Commercial Bank (ADCB).²
- **Olkiluoto 3**, was a Finnish nuclear power plant project. To finance this project, the owner Teollisuuden Voima Oyj ("TVO") raised equity capital from its shareholders and loans. One of these loans, of an amount of EUR 570 million, is guaranteed by Coface^(b), the company that (used to manage) the export-credit insurance on behalf of the French government. For this guarantee, TVO pays a fee to the French Government the "guarantee premium".³ This structure was possible because the plant was being built under a fixed-price turnkey contract with French company AREVA.⁴
- The **Lubiatowo-Kopalino project** refers to Poland's plan to develop three III+ generation NPPs, located in Lubiatowo-Kopalino. The Polish government has already secured Letters of Intent (Lols) from several international partners, including the United States for EUR 17.5 billion through the U.S. Export-Import Bank (EXIM), France for EUR 3.5 billion via Bpifrance, and Canada for EUR 1.4 billion through Export Development Canada (EDC). This ECA financing will be fully backed by a 100% guarantee from the Polish State, provided at no guarantee fee.
- **Units 3 and 4 of the Cernavodă Nuclear Power Plant** in Romania are being financed through export credit agency mechanisms by the United States (US EXIM), Canada, through Export Development Canada (EDC); and Italy, through Servizi Assicurativi del Commercio Estero ("SACE"). The Romanian government, through the Ministry of Finance, has committed to fully guarantee 100% of the loans contracted for the development of these units.⁵
- **Sizewell C** in the United Kingdom has reached its FID in the summer of 2025. At FID the UK was able to secure a GBP 5 billion guarantee from Bpifrance to support commercial bank loans for the project.

Examples of ECA financing involvement

Project	ECA(s) involved	Total project cost (estimated)	Status of project
Barakah (United Arab Emirates)	KEXIM – USD 2.5 billion direct loan agreement	USD 24.4 billion ¹	Completed
Olkiluoto 3 (Finland)	Coface ^(b) – EUR 570 million guarantee on loan	EUR 11 billion ⁶	Completed
Lubiatowo-Kopalino (Poland)	USEXIM – EUR 17.5 billion (LOI) Bpifrance – EUR 3.5 billion (LOI) EDC – EUR 1.4 billion (LOI)	USD 49 billion (estimation, project not completed) ⁷	In progress
Cernavodă Units 3 and 4 (Romania)	USEXIM – USD 3 billion EDC – CAD 2 billion SACE – EUR 2 billion	EUR 7 billion (estimation, project not completed) ⁸	In progress
Sizewell C (United Kingdom)	Bpifrance – GBP 5.0 billion with over 10 banks lending under the guarantee	GBP 38 billion	In progress

Notes: (a) Non exhaustive; (b) France's export credit agency Coface transferred its export credit activities to Bpifrance Assurance Export S.A.S. on 31 December 2016. Sources: (1) World Nuclear Association: Nuclear Power in the United Arab Emirates; (2) OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; (3) EC: IP/07/1400; (4) Nuclear Energy Agency: The Financing of Nuclear Power Plants; (5) Energy Industry Review; (6) Institute for Energy Economics and Financial Analysis; (7) World Nuclear News: President signs bill on funding for Polish nuclear power plant; (8) World Nuclear News: EC approves completion of Romanian reactors.

Involving ECAs in the financing structure can provide several advantages, but also results in higher capital costs and increased financing complexity

ECA financing may reduce the impact on the State budget (depending on EMU treatment) as well as enhancing project governance

- Export credit financing, provided by States through government-mandated ECAs, with the goal to promote exports and employment. As a result, ECA financing holds content requirements with regards to the minimal amount to be attracted from the ECA's respective country.
- Involving ECAs can reduce the impact on the government's budget / debt totals as part of the financing is provided by the ECA.
 - However, ECAs typically require a guarantee from the local Ministry of Finance to cover political and commercial risks associated with the project.
 - The treatment of this guarantee, whether it is considered relevant for the European Monetary Union (EMU) balance, may limit the positive impact that ECA financing has on the State budget.
 - While ECA financing can offer financial relief it is essential to carefully assess the implications of such guarantees on national fiscal policies.
- ECAs can enhance project governance and reduce cost overruns in projects¹.
 - ECAs are sufficiently familiar with supporting outbound nuclear projects and understand the key risks and mitigants.
 - ECAs may offer technical support, which can help address potential issues early in the project lifecycle, preventing costly delays and overruns.
 - This support function is commonly achieved by technical-, commercial-, financial, environmental, regulatory and legal due diligence, often carried out by the advisors of financiers and ECAs.
 - While ECA financing may enhance project governance through due diligence, this benefit should be nuanced. The depth and timing of ECA involvement vary significantly, and their due diligence may not extend meaningfully beyond what a project sponsor could commission independently. Moreover, ECAs primarily insure against commercial and political risks related to exporters—not the broader project risks—meaning that ultimate liabilities may still rest with the State

ECA financing tends to be more expensive than State financing, leading to higher capital costs. Additionally, the involvement of ECAs can increase the complexity of financing arrangements

- ECA financing is more expensive compared to State financing.
- ECA financing is regulated by the OECD's Arrangement on Officially Supported Export Credits (Arrangement).
- The Arrangement sets minimum interest rates for fixed-rate loans via the Commercial Interest Reference Rate ("CIRR").
 - CIRR rates include a base rate set by ECAs, calculated monthly from domestic government bonds, a 100 basis points margin for commercial financing, and a risk premium reflecting the project's credit risk.
 - The addition of the margin and the risk premium lead to a "per definition" higher rate than the borrowing costs of the local State.
- ECA financing increases financing complexity.
 - External parties, such as ECAs, can delay project timelines due to their extensive due diligence processes.
 - These processes involve assessments of financial, environmental, and regulatory compliance, as well as evaluations of the project's feasibility and risk, which can extend the timeline.

Considerations for ECA financing	
Pros	Cons
(+) May reduce impact on State budget (dependent on risk transfer)	(-) ECA financing is more expensive compared to State financing
(+) May improve project delivery via extensive due diligence	(-) ECA financing (during construction) increases financing complexity

Sources: (1) Amentum Third Party Review; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; World Nuclear Association: Financing Nuclear Energy.

Private financiers are more risk averse than ECAs, which leads to higher costs and shorter tenors in availability while having similar pros and cons

The key advantages of private financing are similar to those of ECA financing

- Private financiers can alleviate the burden on public financing by providing part of the project's financing requirements.
- Additionally, they may positively impact the project's governance framework, by providing scrutiny and thereby reducing the risk of cost overruns.
- Like ECA's, private financiers achieve this scrutiny through extensive due diligence on the project characteristics by external advisors.
- Moreover, the volume of financing that ECAs are able to provide often require substantial number of financiers. Coordinating among these large number of stakeholders may enhance project complexity and thus negatively impact project timelines.

A notable advantage of private financing over ECAs is that it is not tied to purchasing from a specific country

- ECAs often tie their financing to the goods or services being exported from their country, whilst providing some room for local costs to be included in the financing package. The percentage of local content that can be included in the ECA financing varies per ECA.
 - This can limit the flexibility in choosing suppliers and may lead to higher costs if the required goods or services are more expensive or less competitive in the mandated country.
- Private financing allows to source goods and services domestically, supporting local manufacturers and suppliers.

Private financing comes with several disadvantages

- Private financiers tend to be more risk-averse compared to ECAs, as ECAs are backed by their governments and have a broader, more strategic mission.
 - As a result, private financiers require a higher return than ECAs, increasing the overall cost of capital and making the project more expensive.
 - Similar to ECAs, private financiers require guarantees from the Ministry of Finance to mitigate potential risks during the construction period, which limits the extent of risk sharing.
- The ticket size of private financiers is often too small to be relevant for nuclear power plant projects. To attract significant financing from private financiers, numerous parties need to be involved, further complicating the process.
- No private bank construction financing without ECA cover is preceded at all in prior European nuclear cases
- Private equity finance of modest development spend is well preceded and active in particular regarding new SMRs projects but seeks venture capital returns commensurate with the risk profile.

Considerations for Private financing	
Pros	Cons
(+) May reduce impact on State budget (dependent on risk transfer)	(-) Private financing is more expensive compared to State and ECA financing
(+) Improves project delivery and reduces cost overruns	(-) Private financing (during construction) increases financing complexity
(+) Private financing is not tied to purchasing from a specific country (unlike ECAs)	

Sources: OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; World Nuclear Association: Financing Nuclear Energy.

The role of private financing must be considered in conjunction with the nuclear project life cycle

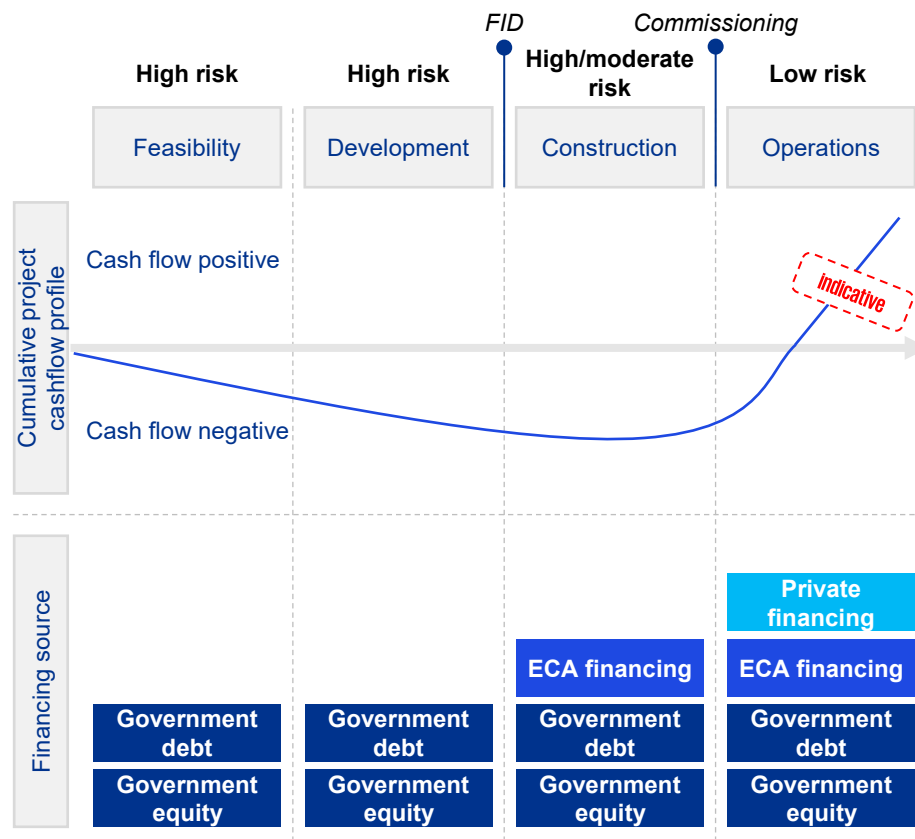
Nuclear new build financing is not static across the project's life cycle

- Nuclear new build financing options changes throughout the project life cycle due to varying risk profiles, and its cash flows at different stages.
- These life cycle characteristics attract different types of investors at various phases. Consequently, this impacts the available capital and financing frameworks should therefore take into consideration specific risk-return preferences of different investors.
- On the right side a conceptual overview is provided of the general cash flow development and timing of private financing of a nuclear new build from the development phase until operations. Note that the decommissioning phase has been omitted for the sake of simplicity.

Private financing typically becomes more prominent at later stages of nuclear new build projects

- During the initial development phase, the availability of private financing is generally limited.
 - Strategic industrial partners and shareholders (often State backed) may offer equity investments or loans to support project development.
 - ECA involvement commences in the Development phase via Lol's and due diligence whilst committing to financing after work packages are determined at the end of the development phase.
- Once projects reach their FID and the construction phase starts, additional sources of financing become available.
- Attractiveness in refinancing increases once a nuclear power plant enters commercial operation, as the completion of construction significantly reduces the project's risk profile.
- The illustration on the right depicts the typical level of interest from private financiers throughout the lifecycle of a nuclear project, as outlined by the OECD¹. It is important to note that actual investor interest can vary significantly depending on the structure and strength of the GSP.

Level of interest of private financiers during the lifecycle of a nuclear project¹



Source: (1) OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

Vendor financing has become increasingly rare and complex, especially after the experience with Hinkley Point C

In the Dutch nuclear project, vendor financing is expected to be limited¹

- Vendor financing in the context of nuclear power plant (NPP) development refers to a financial arrangement where the technology supplier or vendor—typically a company that designs, builds, or supplies components for the nuclear plant—provides part of the capital investment required for the project.
- Vendor financing aligns vendor and project interests, reduces upfront capital needs from the State, and signals confidence, helping attract additional investors.
- This can take the form of an **equity investment** or **Loans or credit**
- Hinkley Point C in the UK is one of the most prominent examples of vendor financing in nuclear power plant development. The project was led by EDF (France) and CGN (China), with both companies contributing equity to finance the construction. This model was intended to align the interests of the vendors with the success of the project and reduce the financial burden on the UK government.
 - The project experienced major delays and cost overruns. EDF, the majority stakeholder, faced enormous financial pressure and had to rely on additional support from the French government.
 - A report by the French Court of Audit advises EDF to be cautious with taking on large financial risks, due to the financial impact of cost overruns at Hinkley Point C, where EDF holds a majority stake.
- EPC wraps and vendor financing have led to multiple large corporates having to be rescued and be restructured in the nuclear vendor space, making appetite for such investments only viable if the vendor is State backed and that State has a policy objective to support exports.
- As highlighted in the market consultation, in the Dutch nuclear project, EDF—like Westinghouse—is expected to take only a limited financial role and focus its participation as technology provider. This aligns with previous market consultations and the conclusions of the French court of audit prescribing that EDF limits its equity risk positions.¹

(Private) owner-led financing is not applicable in the Dutch context

- An owner-led financing structure refers to a model in which the owner of a company provides capital or leads the financing of a project or investment.
- Expectation is that there will be a large portion of owner-led financing (via equity of the State-owned enterprise). Additionally, the State may want to seek some form of equity by vendors to align the interest between the parties.

Considerations for vendor led financing	
Pros	Cons
(+) aligns vendor and project interests	(-) past experiences have negatively impacted risk appetite
(+) signals project confidence to investors	(-)
(+) limits the upfront impact on the State's budget	

Source: (1) Kamerstukken II, 2024/25, 32 645, nr.157.

The way cost overrun risks are allocated depend on both the delivery- and financing model

The choice for a delivery model decides on whether additional risk sharing mechanisms are preferred via the financing model

- In NPP projects, risk regarding cost overruns can be significant and have proven difficultly to predict, based on the numerous examples of overrun throughout Europe.
- The traditional approach to managing cost overrun risks firstly assesses which party is responsible for the materialised overruns. A first assessment decides whether the higher costs are covered within the agreed upon delivery model^(a) and thus are covered by the contractor.
 - fixed-price or turnkey EPC contracts are used to transfer construction risk to contractors, reducing the likelihood that cost overruns will affect either equity or debt holders directly.
 - We note that it is unlikely that a technology provider will agree with a delivery model that places all (or majority) of the risks and responsibilities with them. However, it is expected that a large part of the risk sharing will occur via the delivery model.
- With regards to the cost overrun risks that materialise in the project delivery entity, we note the following mechanisms with regards to cost overrun risk absorption:
 - **First loss position of equity:** The primary responsibility lays on equity holders, who are expected to absorb excess costs before any impact is felt by debt providers.
 - **Contingent equity or debt:** Equity and lenders may provide contingent commitments requiring investors to provide additional capital if project costs exceed predefined thresholds.
 - **Lender of last resort (debt or equity):** The black swan risks with NPPs can be too big for any private investor to incur. Accordingly, their exposure is often capped, with the State stepping in as a lender (via either debt financing or equity) of last resort once private contributions reach a maximum limit.

Case studies and their cost overrun mechanics

Case	Cost overrun
Paks II	Cost overrun risks in Paks II are borne by the Hungarian State (via its first loss position of equity) and with Rosatom (technology provider) bearing some contractual risk via contractual penalties (via its delivery model) and no private investors exposed.
Dukovany 5	Cost overrun risks in Dukovany 5 are split between ČEZ and the Czech State. ČEZ holds a contingent equity commitment of EUR 1.77 billion to finance cost overruns not caused by Legitimate Grounds. ^(b) This exposure is capped, positioning the Czech State as a lender of last resort .
Lubiatowo-Kopalino	Poland explained that in case of any cost overruns which will generate need for additional funding, PEJ would first attempt to obtain additional financing from ECAs, which will also be 100% guaranteed by the State. If external financing is not available on acceptable terms, PEJ would rely on additional equity contributions from the Polish State as lender of last resort .
Hinkly Point C	Cost overruns at HPC are predominantly the responsibility of its equity holders, via their first loss position of equity . Additionally, the shareholders include contingent equity that can be drawn for cost overruns. Very significant contingency levels were priced into the strike price.
Sizewell C	Cost overruns up to a cap are partly recoverable (included in the asset base) and partly absorbed by equity without return (first loss position of equity). Costs beyond the cap may be covered through additional equity, adjusted revenues, or extra government support (Lender of last resort) with private capital protected from dilution below a floor level.

Notes: (a) A fixed price Turnkey project, for example lays the majority of the cost overrun risks with the contractor, and not the project delivery entity. In case of a Joint Delivery Model this responsibility between Project Delivery entity and Contractor is less clear. (b) Legitimate Grounds are considered: State financing cost changes or unilateral revocations or changes to the State financing, Delayed FID, Change in the Law, Breach of Obligations by the State or State Entities, Security Requirements, Requirements of Authorities, Natural disasters or similar events, Events beyond the control of EDU II, Infrastructure and grid issues.

The analysis of financing options has yielded several key findings that should be considered for the choice of a GSP

The importance of the cost of Financing in Nuclear Projects

- Nuclear power plants (NPPs) are among the most capital-intensive infrastructure projects, requiring substantial upfront investment and long construction periods before generating revenue. This makes the cost of capital a critical factor in determining the overall project viability.
- The LCOE for nuclear is particularly sensitive to financing costs due to the high proportion of fixed capital expenditures.

The different financing models each have distinct advantages and drawbacks

- **State Financing** offers the lowest cost of capital and maximum strategic control but places the full financial burden and risk on the government. It allows projects to proceed without financing delays but impacts public debt levels.
- **ECA Financing** can reduce the burden on the State budget (depending on State guarantee treatment) and maybe improves the assumptions in the business case through rigorous due diligence, but it is more expensive and administratively complex than State financing.
- **Private Financing** can reduce the burden on State budget and enhance project governance. Nevertheless, it is the most expensive option and often requires State guarantees. Private financiers are also more risk-averse and typically enter at later project stages when, amongst others, the design of the reactor is more detailed.
- **Vendor Financing** aligns interests and signals confidence, it has become rare due to past negative experiences (e.g., Hinkley Point C).
- **Owner-Led Financing** in the Dutch case, is related to the equity stake provided by the newly established SOE and possibly by any vendors.

The different financing models vary across the lifecycle of an NPP

- Given the characteristics of a NNP and differences between equity and debt providers financing may be attracted at certain points in the project's life cycle, matching the risk appetite of the capital providers.
 - In the **development phase** the financing of NPPs is dominated by the State due to the high uncertainty surrounding the project;
 - In the **construction phase** (After FID) ECAs and some private financiers may enter, often with guarantees backed by the State;
 - In the **operational phase** refinancing becomes more attractive as project risks decline.

For private financing to commit (ECA/private financiers), more certainty and clarity is necessary on the project

- The current state of the project is missing several critical components, including the location, technical design, permits, governance structure of the SOE, Business Case.
- Private financiers will perform due diligence on the above-mentioned aspects to be concluded, providing more certainty and clarity on their possible returns and associated risks.

The various financing models each score differently along the criteria of the Decision-Making Framework^(a)

Financing models					
Criteria	State financing	ECA financing	Private financing	Owner-led financing	Vendor financing
Impact on debt and balance	– High impact on government debt and fiscal balance	– Reduces public financing burden but typically requires a State guarantee with unclear impact on EMU	– Similar to ECA financing.	– Minimises State budget impact; depends on financial strength (and type) of the owner.	– Low impact on State budget; vendor equity participation (e.g., HPC, SZC).
Affordability	– Lowest cost of capital due to strong State credit rating. – Flexibility with regards to financing costs charged to the project (see Dukovany)	– Slightly higher cost of capital than State financing – Less flexibility with regards to financing terms and costs due to OECD rules	– Higher cost of capital compared to State and ECAs – more flexibility than ECAs but constrained by risk appetite	– Cost depends on owner's financial structure and possible (State) backing.	– Higher costs; vendors cautious due to past equity risk experiences.
Feasibility	– Simplifies financing and shortens lead times but subject to EC State aid approval. – Budget constraint as available State sources are currently deemed insufficient	– More complex due to due diligence requirements; – Small quantum in context of overall project due to content requirements – Available post- development phase as work packages are determined	– Somewhat more complex than ECAs as requires a broad syndicate to provide volume; – Typically available closer to end of construction.	– Not applicable in the Dutch context as no company exist to pursue this Project.	– Limited feasibility; availability of vendor capital is limited. ^(b)
State control	– Provides direct control via equity- and credit agreements	– Partial lender control; shared with private parties through creditor agreements.	– Same as ECA: partial lender control via creditor agreements.	– Varies by owner type (SOE or not); contracts can safeguard State interests (Dukovany)	– Minimal control; managed through contracts among vendor, owner, and State.
Risk sharing between State, investors and vendors	– No inherent risk sharing; must be addressed in delivery model.	– Partial sharing of cost overrun risks, depending on guarantees.	– Similar to ECA: partial risk sharing based on agreements.	– Shared risk between owner and State.	– High risk sharing; aligns vendor and State interests through equity

Notes: (a) The models have not been scored against the prerequisites as all variants have been proven successful in gaining approval from the EC and/or generating market confidence. Whether the prerequisites are met depend largely on the combination of the models and GSP (b) Past experiences (HPC and SZC) have made vendors hesitant to incur new NPP equity risks. This is in line with prior market consultations and recommendations from the French Court of Audit.

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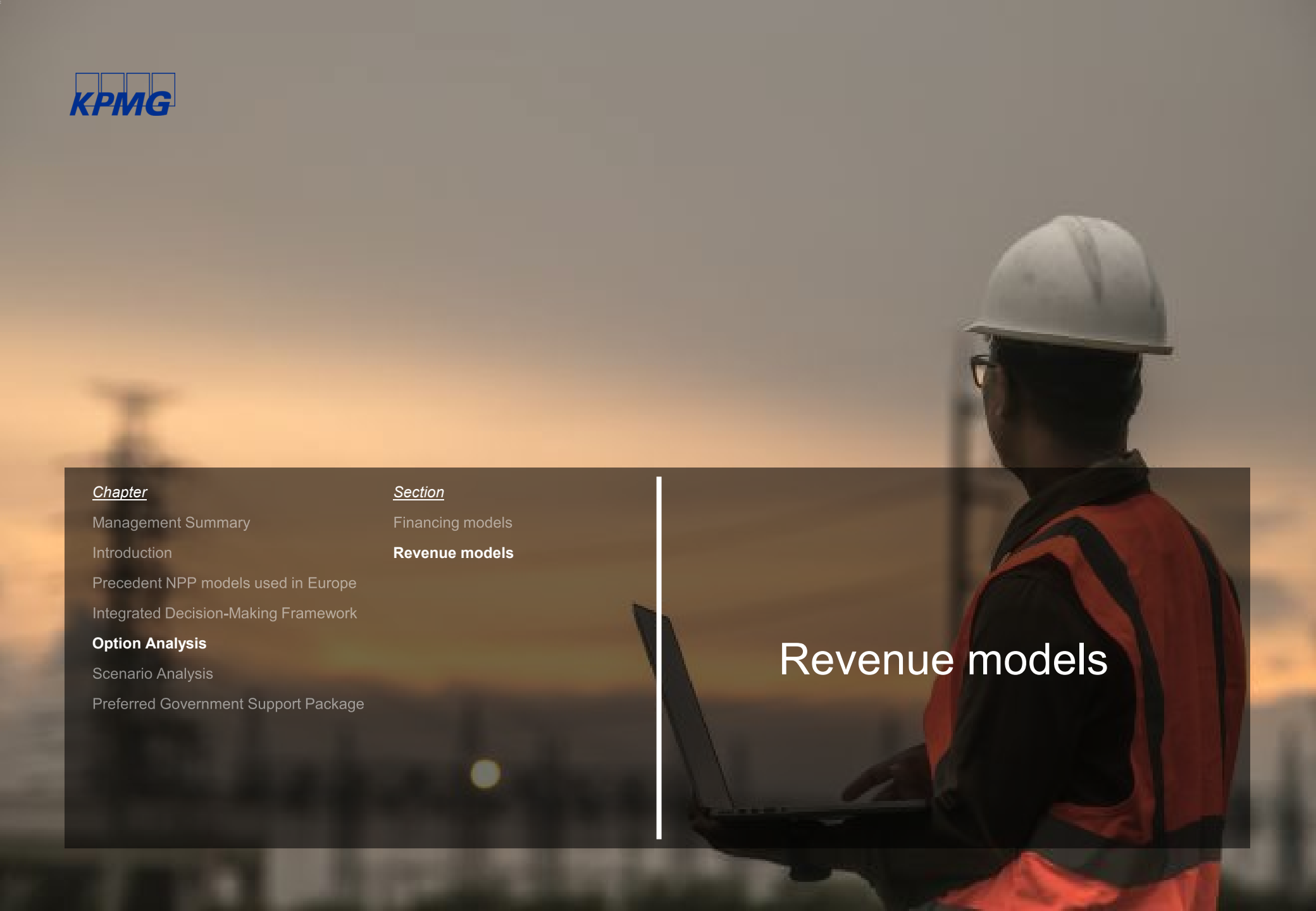
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Revenue models

The background of the slide is a photograph of a construction worker in profile, facing right. The worker is wearing a white hard hat, safety glasses, and a high-visibility orange and black safety vest over a dark long-sleeved shirt. They are holding a laptop computer. The background is a blurred industrial or construction site at dusk or dawn, with warm orange and yellow light from the sky.

The various revenue models are assessed individually to highlight their key characteristics and (dis-)advantages

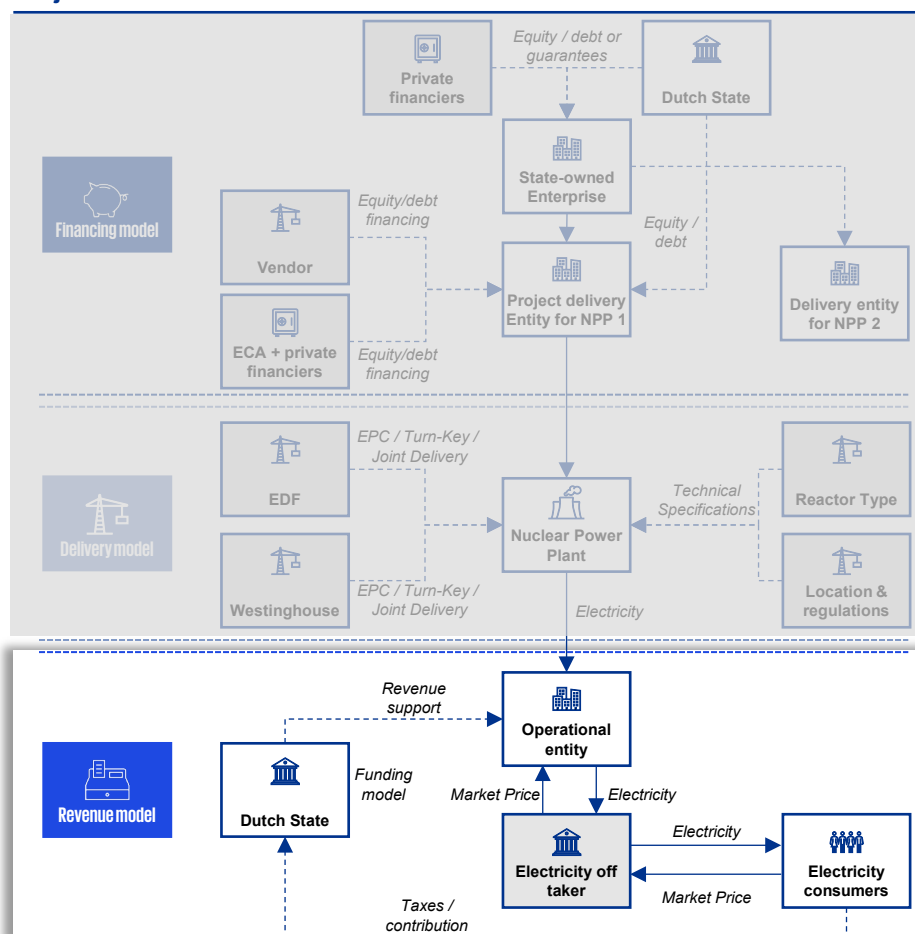
A well-defined revenue model, which mitigates market risks and secures return for capital providers, is essential for a nuclear power plant project

- The long construction period of an NPP creates a fundamental challenge for investors. There is a significant temporal disconnect between the moment capital is committed and the moment the NPP begins to generate positive cash flows. As a result, investors in NPPs are exposed to two critical risks:
 - First, there is the possibility that the plant may never reach commissioning due to shifts in political priorities, regulatory changes, technical issues that lead to construction disruption or technological obsolescence with regards to Nuclear.
 - Second, even if the plant is commissioned, the energy market may have evolved in ways that undermine the original Business Case—such as reduced demand or lower-than-expected electricity prices. Both risks directly threaten the financial viability of the project and the returns expected by investors.
- While full public financing can absorb these risks, private investors require mechanisms that provide greater certainty over the return on their investment.
- Additionally, the government requires a target return on equity from the SOE (article 5.7.3, 'Nota Deelnemingenbeleid Rijksoverheid 2022'), which may indicate the need for a mechanism to support cash flows, even when fully public financed.
- Several revenue models have been developed to address this need:
 - A **Contract for Difference** offers price stability by compensating the generator when market prices fall below a pre-agreed strike price.
 - A **Power Purchase Agreement** is a flexible, often tailor-made offtake agreement between a buyer and a seller fixing both the price and quantity of electricity sold, typically through a long-term bilateral contract.
- However, both CfDs and PPAs only provide revenue support^(a) during the operational phase of the plant. They do not mitigate the full spectrum of commercial risks and, particularly the risk of non-completion. This can be addressed via guarantees or via:
 - The Regulated Asset Base (RAB)^(b) model that allows for returns to capital providers during the construction phase, improving the risk-return profile for private investors.

Notes: (a) Revenue support is not a guarantee for return of investors. In case of (lengthy) outages no production is generated to be able to fulfil the PPA contract, leading to revenue losses; (b) The RAB revenue model, although not being an explicit financing model, also impacts the financing necessity (lowering it) by decreasing the amount of interest capitalization (in theory).

Sources: World Nuclear Association: Financing Nuclear Energy; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

Project structure



The RAB model is theoretically appealing for reducing the financing costs of nuclear projects, but several important factors need to be considered

The RAB model is particularly appealing due to its ability to generate revenue during the construction phase

- Investors expect a return on their investment. The NPP uses the funds to carry out capital expenditures for project development. The investments are capitalised and added to the pool of assets eligible to earn a regulated return.
- An independent regulatory authority sets the allowable rate of return on the RAB. The NPP earns this return over the value of the activated assets, and the resulting revenue is used to repay the capital providers. This early revenue stream reduces the need to capitalise interest over a long construction period—unlike in traditional models where all financing costs accumulate until commissioning. As a result, the total capital cost is lower, which in turn improves the LCOE.
- To fund the RAB, most of the time a levy is applied to consumers via their energy bills. This levy is linked to the development of the NPP and serves as the project's revenue stream, ensuring income is generated even during the construction phase.

While the RAB model (theoretically) offers clear advantages for financing large-scale infrastructure, its practical application comes with several drawbacks

- Since the developer earns a return based on the value of the asset base, there is a risk that cost control incentives are reduced. If cost overruns are compensated via the RAB, the motivation to minimise expenses may be weakened (moral hazard).
- There can be a mismatch between the return set by the regulator and the return required by investors. If the regulated return is too low, it may fail to attract sufficient capital, potentially increasing the overall cost of financing.
- The Netherlands does not have a regulatory framework in place in the nuclear domain. While the Netherlands does have the Authority for Consumers and Markets (“ACM”), which regulates the RAB model for energy networks, it has no precedent or expertise in overseeing nuclear infrastructure. Significantly expanding the ACM's mandate, would be a complex and time-consuming task.^(a)
- To date, the RAB model has only been applied in Europe to the ongoing Sizewell C nuclear power plant. As a result, the model has not been extensively applied in practice of NPPs, adding an extra layer of uncertainty for investors.

Note: (a) the UK’s legislative process in preparation of the RAB model of Sizewell C has taken over 4 years and is yet to be fully accepted by the investment community. Sources: World Nuclear Association: Financing Nuclear Energy; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build.

- Another drawback of the RAB model is that consumers begin paying for the project before it produces electricity. Charges are levied on electricity suppliers during the construction phase and passed on to end-users, which can raise affordability and public acceptance concerns—especially for long lead-time infrastructure like nuclear power.

The nuclear RAB scheme in the UK has been designed to encourage capital investment into nuclear power, but is not yet effective

- The UK’s adaptation of the RAB model for nuclear projects aims to reduce capital costs and serves as the revenue support mechanism for the Sizewell C project.
- However, the risk allocation proposed in this model has not yet gained acceptance from the international investment community, leading to further delays and subjecting the project to an independent spending review.
- To keep the project moving forward, the government must continue financing until it can attract sufficient private capital.

Considerations on the RAB model	
Pros	Cons
(+) Provides revenue support throughout the construction phase	(-) Moral hazard with regards to cost overruns
(+) Limits the capitalised interest and thus capital costs, which positively impacts the LCOE in NPP projects	(-) Possible misalignment between required return and rates set by the regulator
(+) In theory, the RAB model should attract investors encouraging them to invest in nuclear projects	(-) The Netherlands does not have a regulatory framework in place in the nuclear domain
	(-) The RAB model has no track record in nuclear
	(-) Costs appear on consumer bills during construction

A Contract for Difference model offers advantages that make it an attractive integral component of a viable revenue model

A CfD provides price certainty for a specified period, which is particularly beneficial in the volatile electricity market

- A CfD is a financial contract where the power generator is paid the difference between a market price and a fixed “strike price”. The counterparty of this contract is often a government or government-backed entity.
- The power generator usually sells electricity at market prices, receiving a top-up if market prices are below the agreed strike price, and paying back if the market prices are above the agreed strike price.
- By guaranteeing a fixed price for the electricity generated, a CfD shields the nuclear power plant from fluctuations in market prices during the operational period of the plant. This stability ensures predictable revenue streams, lowering perceived investment risk and consequently enabling access to more financing.
- The EU Electricity Market Design Directive prescribes the use of CfDs—or equivalent instruments—for any form of State aid supporting renewable electricity generation.
- Implementing a CfD model is relatively straightforward and requires fewer legislative and regulatory changes compared to the RAB model.

The CfD model comes with some drawbacks

- CfDs are intended to provide price certainty after an energy project is commissioned, by providing revenue support. However, during the construction phase (which for nuclear power plants often lasts 10+ years), there is no revenue stream, and therefore no protection against risks via CfDs. Private investors are often unwilling to bear this risk.
- The Hinkley Point C case, which mainly relied on a CfD in support of its private investors, highlights the risks these investors face during construction when State support primarily applies in the operational phase. Significant cost overruns at HPC have severely impacted investor returns, with the CfD offering only partial mitigation during operations

A CfD requires additional State support to mobilise private capital during construction

- The recent example of HPC has underlined the importance of combining CfDs with some additional form of State support, to attract private financing during construction. After the HPC experience both the Dukovany and the Lubiatowo-Kopalino project have included additional State support measures besides the CfD in support of private financiers:
 - **Dukovany / EDU II:** The (private) equity provider ČEZ is additionally supported in the construction period via State financing covering 98% of baseline costs at 0% interest and a cap on ČEZ's exposure to cost overruns.
 - **Lubiatowo-Kopalino:** For PEJ to attract the substantial aspired amount of private- and ECA debt financing, additional State support measures were necessary. The Polish State provides a 100% guarantee on the ECA and private financing and a 30% equity stake as first loss position.

Considerations on the CfD model	
Pros	Cons
(+) A CfD mitigates electricity market risks by providing price certainty	(-) No revenue during construction
(+) Implementing a CfD model requires less legislative and regulatory changes	(-) Agreeing a ‘fair’ CfD value for a period of many years is extremely difficult
(+) It is not necessarily a requirement to have the CfD (fully functioning) in place before the construction phase	(-) Despite the price stability offered by CfDs, there is no absolute guarantee of return on investment for (private) investors
(+) The EU Electricity Market Design Directive prescribes the use of CfDs	

Sources: World Nuclear Association: Financing Nuclear Energy; OECD: Effective Frameworks and Strategies for Financing Nuclear New Build; World Nuclear Association: Nuclear Power in Czech Republic.

Through the reforms to the Electricity Market Design rules, two-way CfDs are now the EC-mandated mechanism for renewable and nuclear projects

EU's EMD has mandated new design principles for CfDs

- The European Parliament drafted legislation to address several key challenges in the energy sector – mostly sparked by the invasion of Ukraine and the subsequent energy crisis.
- This reform has resulted in a reform to the Electricity Market Design rules which were entered into force on 16 July 2024.
- Key is that the new rules promote short-term markets and cross-border electricity trade to enhance market flexibility and efficiency. This includes better use of interconnectors and more efficient balancing of supply and demand.
- The new rules seek to encourage efficient market behaviour while limiting potentially distortive effects of the CfDs on the operational decisions of the generator. They seek to provide remuneration protection to guarantee the economic viability of the projects while avoiding excess compensation.

As per the EMD's design rules, all direct price support schemes in the form of two-way contracts for difference and equivalent schemes with the same effects need to be designed to:

- Preserve incentives for the power-generating facility to operate and participate efficiently in the electricity markets;
- Prevent any distortive effect of the support scheme on the operation, dispatch and maintenance decisions of the power-generating facility or on bidding behaviour in day-ahead, intraday, ancillary services and balancing markets;
- Ensure that the level of the minimum remuneration protection and of the upward limit to excess remuneration are aligned with the cost of the new investment and the market revenues, to guarantee the long-term economic viability of the power-generating facility while avoiding overcompensation;
- Two-way contracts for difference or equivalent schemes with the same effects, and the applicable strike prices, shall be designed to ensure that the distribution of revenues to undertakings does not create undue distortions to the market and trade in the internal market;

- Avoid distortions to competition and trade in the internal market resulting from the distribution of revenues to undertakings;
- Include penalty clauses applicable in the case of undue unilateral early termination of the contract.

There are some key project-relevant principles introduced in the EMD proposal:

- **Incentive of consumers:** Distribution of the revenues to final electricity customers is designed so as not to remove the incentives of consumers to reduce their consumption or shift it to periods when electricity prices are low and to undermine competition between electricity suppliers.
- **Distribution of excess revenues:** Revenues collected from producers subject to direct price support schemes in the form of two-way CfD are passed on to all final electricity customers, including households, SMEs and industrial consumers, based on their share of consumption (same cost / refund per MWh consumed).
- **REDII compliance:** Support schemes for electricity shall be designed so as to maximise the integration of electricity from (renewable) sources in the electricity market and to ensure that (renewable) energy producers are responding to market price signals and maximise their market revenues.
- **Price settlement:** Strike and reference price are defined in CfD contract, presumably not covering complete generation.
- **Remuneration protection:** Minimum remuneration protection is provided. Also, excessive remuneration is limited within CfD to curb receiving high market prices by supported sources and to stabilise prices.
- **Floor and cap strike price structures and PPA carve outs** can be designed within this same policy framework and can be useful in bridging different viewpoints with regards to projected market price levels or the evolution of the demand side. Accordingly, they may be useful for showing State aid is minimised

CfD design choices affects project economics, risk allocation and market behavior, case studies reflect different design choices

Key considerations on design choices of a CfD

- **Cost:** Electricity market prices may stay low or even negative. A fixed strike price offers predictability but may become misaligned with market conditions. An indexed strike price (e.g. inflation-linked) maintains real value over time. A floor price ensures minimum revenue but may reduce market discipline.
- **Reference price:** Using the realised price (what the generator earns) aligns CfD payments with real market exposure but introduces volatility. A formulaic reference price (e.g. average baseload price) offers stability and simplicity but may not reflect actual sales, creating a mismatch between revenue and CfD compensation.
- **Volume basis:** Actual volume ensures CfD payments reflect real output, encouraging efficient operations. However, it exposes the project to operational and market risks. Reference volume (e.g. based on expected capacity factor) smooths payments but may over- or under-compensate if actual output deviates.
- **Dispatch obligation:** A must-dispatch obligation ensures all power is sold, supporting system reliability and revenue predictability. However, it limits operational flexibility. Flexible dispatch allows the operator to optimise output based on market signals or maintenance needs but may reduce CfD payment accuracy and complicate oversight.
- **Sales channel:** PPAs provide long-term revenue certainty and reduce market risk, which is attractive for financing. However, they may limit upside in high-price markets. Market sales (spot or forward) increase exposure to price volatility but allow for strategic optimisation and potentially higher returns.
- **Duration:** A CfD covering the full project life offers maximum revenue stability and supports financing. A merchant tail (e.g. CfD for 35 years of a 60-year plant) encourages cost control and competitiveness in later years but introduces long-term market risk that must be managed by the operator or investors.

CfD example case studies summarised

Component	Lubiatowo-Kopalino	Dukovany 5	Hinkley Point C
Counterparty	CfD with the State	CfD with the State	Low Carbon Contracts Company (government owned)
Delivery	Direct sale to consumers	Electricity sales to a "Supply SPV" during first 40 years with a different arrangement thereafter	Electricity sales onto the market with no exclusive off-taker
Volume	Sale of entire volume through combination of PPAs and sale on power exchange	All output sold to SPV during first 40 years. Yearly CfD settlement based on "Reference Quantity"	No guaranteed sales / purchase obligation by UK government
Price	Two-way CfD with additional mechanisms to disincentivise sale below variable cost	Two-way CfD with a market exposure component and a yearly settlement term. Incorporates variable cost, like Polish case	35-year two-way CfD with two potential prices based on the status of Sizewell C
Duration	60-year operational life, CfD for entire period	60-year operational life, 40-year CfD	60-year operational, CfD for first 35 years
EC's view	Opening decision on March 4, 2025, stating that it cannot confirm, at this stage, that the design of two-way CfD fully complies EMD principles	Final decision on 30 April 2024 commenting, that support for is compatible with the internal market	Final decision on 8 October 2014 commenting, that support for is compatible with the internal market

PEJ and EDU II: Two CfD approaches balancing market exposure, operational efficiency, and revenue stability

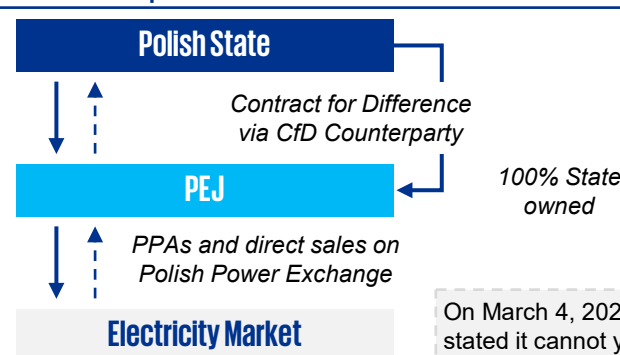
Lubiatowo-Kopalino – CfD structure

- **Counterparty:** PEJ will sell electricity directly to commercial consumers and have a CfD in place with the State.
- **Delivery:** The NPP will deliver the physical electricity to the private offtakers.
- **Volume:** PEJ can dispatch volume through PPAs and under various spot and forward products on the Polish Power Exchange. PEJ's CfD formula somewhat incentivises sales through PPAs over other products.
- **Price:** Under the two-way CfD, if the market price (reference price) falls below the Strike price, the counterparty pays PEJ the difference—and vice versa—ensuring revenue stability. There are additional mechanisms to disincentivise selling electricity below variable costs.
- **Duration:** The CfD is expected to remain in effect for the NPP's full 60-year operational life, enabling long-term compensation control.

Dukovany 5 – CfD structure

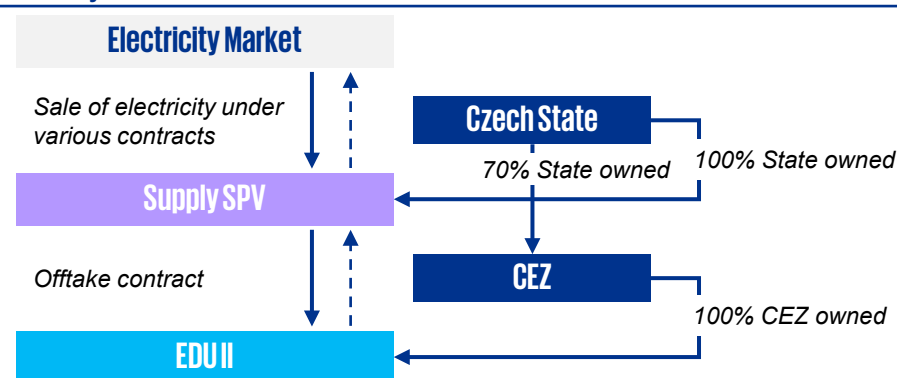
- **Counterparty:** EDU II will hold the operating license and will sell all the generated electricity to the Supply SPV (100% State owned). The Supply SPV will then sell the output directly on the market.
- **Delivery:** EDU II sells its output to the Supply SPV during the PC contract term. After the contract term, the supply arrangement changes.
- **Volume:** The output generated by the NPP is oftaken by the Supply SPV. The CfD formula factors in operational costs, to determine if EDU II is efficiently selling power. The formula is dynamic and disincentivises EDU II when it sells power inefficiently.
- **Price:** The PC remuneration uses a two-way CfD that adjusts EDU II's yearly revenue to bring it in line with the Strike Price, barring certain conditions where EDU II is not fully compensated.
- **Duration:** The CfD will be effective for 40 out of 60 years of NPP's operational life with an additional delay mechanism that can shorten the term of the CfD.

Lubiatowo-Kopalino – CfD structure



On March 4, 2025, the EU Commission stated it cannot yet confirm whether the two-way CfD design fully aligns with Electricity Market Design principles.

Dukovany 5 – CfD structure



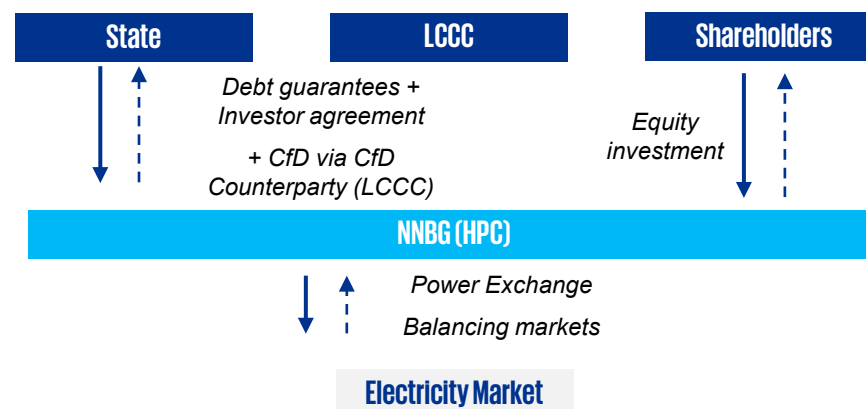
On April 30, 2024, the European Commission confirmed that support for the Dukovany NPP is compatible with the internal market.

HPC operates fully in the wholesale market with a CfD that stabilises revenue based on market price differences

Hinkly point C – CfD structure

- **Counterparty:** The CfD Counterparty is the LCCC, a government-owned private company designated by the State and responsible for making or receiving payments based on the difference between the market price and the Strike price.
- **Delivery:** The electricity produced by HPC will be sold into the market with no exclusive offtaker.
- **Volume:** NNBG is not guaranteed any minimum of electricity sales, must sell on the market and there is no purchase obligation by the UK government.
- **Price:** NNBG will sell electricity directly into the UK wholesale electricity market. If the market reference price is below the Strike price the CfD counterparty (LCCC) pays NNBG the difference and vice-versa.
- **Duration:** The CfD spans a 35-year term from the date of commissioning, designed to provide revenue stability and reduce exposure to market price volatility.

United Kingdom (Hinkly point C) – CfD structure



On 8 October 2014, the Commission approved State support for Hinkley Point C as compatible with the EU internal market.

PPAs provide long-term revenue certainty and market stability, but require substantial amount of large off takers

A PPA offers long-term price and volume guarantees, attracting (private) capital by reducing market exposure

- In the case of a nuclear power plant, a PPA can provide more predictability of the project's projected revenues, at least for the part that is covered by the PPA.
- A PPA is an agreement between an electricity generator (the seller) and a purchaser (the buyer). the buyer agrees to purchase a defined amount of power at an agreed price from the generator from a specified source.¹
 - The agreed price at which the buyer will purchase power from the seller can be determined using structures such as a fixed price, market-indexed price, hybrid pricing or floors and ceilings (mimicking a CfD mechanism).²
 - The contracted volume of electricity can be structured in various ways, such as pay-as-generated, baseload delivery, or min-max volume commitments.²
- PPAs can be divided into two types³:
 - Commercial PPAs: where the counterparty is a non-Governmental entity operating, such as a utility, power trader or corporation
 - Government PPAs: where the counterparty is the Government entity.

The pros and cons a PPA are similar to a CfD, however, PPAs are more comprehensive in that they typically cover both price and volume, while CfDs focus solely on price stabilisation

- PPAs are typically commercial arrangements between two private entities, whereas CfDs are government-backed mechanisms designed to provide revenue stability for electricity producers
- CfDs typically result in trading more of the output under shorter term durations due to market depth and liquidity constraints and limits to corporate balance sheets of buyers for collateral.
- PPAs for nuclear power if with hyperscalers or large power users are a good fit for baseload long term demand-supply needs matching with parties that can post the collateral and that reduce the CfD need; whilst also avoiding too high day ahead volumes that can cause other issues including short term market manipulation driven by profit optimisation that may not fit with policy goals

Note: (a) It is unlikely that the market will be distorted if PPAs are closed between producers and buyers of electricity on a voluntary basis and without regulatory interventions in price- setting. The EC includes PPAs, in line with CfDs as preferred instrument to support renewable energy projects. State support for PPAs can be envisaged if a State provides cover for counterparty risks, which may be significant for PPAs.

Sources: (1) World Nuclear Association: Financing Nuclear Energy; (2) Business Energy Deals; (3) European Investment Bank: Commerical Power Purchase Agreements (by Baringa); (4) Regulation (EU) 2024/1747.

To utilise a PPA revenue model, having large off takers is typically necessary

- In a PPA, the buyer receives actual electricity volumes making it a physical delivery contract. In contrast, a CfD functions purely as a financial instrument: it compensates the electricity generator for the difference between the market price and a pre-agreed strike price, without involving the transfer of physical electricity.
- Because PPAs are negotiated privately between market participants, they do not inherently distort the market—they are considered standard commercial agreements.⁴
 - The EC refers to PPAs as an important instrument in support of renewable energy projects. However, PPAs face a set of barriers, particularly the risk of payment default from the buyer in the long-term agreement.
- NPPs, which produce large and consistent baseload electricity, require off takers with substantial and stable demand profiles. However, large industrial or corporate consumers capable of committing to the long-term, high-volume PPAs only make such commitments closer to operational start given known issues of COD delays. The likely need to aggregate demand makes it challenging to structure viable PPAs without either a trading/PPA team or government intervention.

Considerations on the PPA model	
Pros	Cons
(+) Provides long-term price and volume guarantees	(-) Similar to a CfD, it does not offer revenue during construction
(+) Helps secure financing by reducing market risk (both price and quantity)	(-) Depends on offtaker credit quality and balance sheet for collateral
(+) The EC encourages the use of PPAs	(-) Buyers are typically limited to large companies and purchasing decisions would be closer to COD
(+) Low market distortion ^(a)	

Compared to the RAB, the CfD model requires that developers finance the construction of a nuclear project and bear the associated risks

The RAB model ensures stable revenue for investors of the nuclear power plant by allowing it to earn a regulated return on its invested capital

- The RAB model aligns well with the expectations of private investors, who often prefer shorter-term returns rather than waiting until the project becomes operational.
- In theory, the RAB model is able to attract investors in an earlier phase, prior to operations, as the NPP can provide a return during construction, which is used to compensate capital providers.
 - In practice, we note that the example of Sizewell C, which has just reached FID, has been able to attract the aspired private capital during the development and early parts of construction phase, although at a minimal amount. This may be related to the regulatory complexity of applying the RAB model in the Nuclear field, which has not yet been fully accepted by the investor community.

A CfD and PPA ensures price stability by guaranteeing a fixed price for the electricity generated, protecting the project from market price fluctuations

- The CfD and PPA models provide support to the NPP during its operational period.
- As a result, these models are able to attract investors after the largest risks of an NPP, during construction, have been mitigated (either through other State guarantees or because the commissioning date is closer).
- The experience with Hinkley Point C and current examples of Dukovany and Lubiatowo-Kopalino exemplify how private capital providers require additional State support measures to a CfD if they are expected to contribute in the phases prior to operations.
- If a CfD model is used to support the NPP, further assessment may be necessary should the NPP later enter into PPAs with commercial parties. To comply with EC State aid rules and minimise market distortions, it must be ensured that PPA prices are not artificially low. This risk can be mitigated by excluding the volumes traded under such PPAs from CfD support. These considerations should be evaluated in more detail at a later stage.

Risk mitigation per revenue model				
Type	Feasibility	Development	Construction	Operations
Key risk	<i>Developing a project</i>	<i>Attracting (private) financing</i>	<i>Delays and cost overruns</i>	<i>Electricity market risks</i>
CfD model	Not applicable	Is not able to mitigate the respective risks of these phases on a stand-alone basis, as return for investors depends on revenue from the operational period onwards.		Mitigates the risks related to the price of electricity. ^(a)
PPA model	Not applicable	Is not able to mitigate the respective risks of these phases on a stand-alone basis, as return for investors depends on revenue from the operational period onwards.		Mitigates the risks related to both the price and quantity of electricity. ^(a)
RAB model	Not applicable	Mitigates both the risks during construction (delays and cost overruns) as well as market risks, as the return for financiers is related to the asset base, which grows during construction, and not to developments in the market.		

Note: (a) as mentioned on the previous pages, the measure in with both the CfD and PPA mitigate revenue risks, depends on the quantity of electricity produced. In case of (long) unforeseen downtimes of a NPP, no revenue support is generated via a CfD or PPA. Accordingly, there is no guaranteed revenue during the operational phase.

The analysis of the revenue models has yielded several key findings that should be considered for the choice of a GSP

The advantages from the RAB-model do not outweigh the practical regulatory and legislative challenges in the Dutch context

- The RAB model presents an attractive revenue model because it allows for revenue generation during the construction phase of a project. This early income stream reduces the need to accrue interest over long construction periods, which in turn lowers the LCOE. Additionally, the model aligns with the expectations of private investors who prefer shorter-term returns and reduced risk exposure.
- Despite its benefits, the RAB model faces significant implementation challenges in the Netherlands which have led the government to decide¹ not to adopt this model.
 - The Netherlands lacks a dedicated regulatory framework and experience in previous projects for nuclear infrastructure. While the ACM regulates RAB models for energy networks, it has no precedent or expertise in overseeing nuclear projects. Expanding ACM's mandate or establishing a new regulatory body would be a complex and time-consuming process.
 - The UK legislative process in preparation of Sizewell C has taken over 4 years and is yet to be fully accepted by the investment community.
 - The limited precedents of RAB models in the context of nuclear projects in Europe adds to uncertainty for investors.

The benefits of PPAs are offset by structural market limitations that constrain their applicability for nuclear projects in the early phase of the project

- PPAs offer long-term price and volume certainty, making them attractive for private capital by reducing market exposure, particularly relevant for nuclear projects with high upfront costs and long lead times.
- Any inclusion of PPA offtakes could be useful for minimising the level of intervention and show aid minimisation, consistent with State aid principles. Given the long development and construction period however, it is likely that PPA appetite will be identifiable at a later pre-operations stage.
- Volumes limited to large, creditworthy off-takers capable of committing to long-term, high-volume contracts, likely identifiable closer to operations.

Source: (1) Kamerstukken II, 2024/25, 32 645, nr 157.

A CfD is a preferred revenue support model but requires complementary State support to mobilise private capital during construction

- The CfD model guarantees a fixed price for electricity during the operational phase of a NPP, shielding it from market fluctuations. The resulting revenue stability significantly reduces investment risk, making it easier to secure financing and lowering the cost of capital.
- The CfD model aligns well with both Dutch and European policy frameworks. The EU Electricity Market Design Directive prescribes the use of CfDs for State support for renewable energy. Moreover, the Netherlands has prior experience with CfDs in offshore wind projects.
- Despite its advantages, the CfD model has notable limitations—particularly during the construction phase of NPPs. CfDs are designed to provide revenue support only after a project is commissioned. For NPPs, which typically have construction timelines exceeding 10 years, this means there is no revenue stream or risk mitigation during the most financially vulnerable period.
 - This gap in support coverage places the burden of construction risk entirely on the NPPs investors. The Hinkley Point C (HPC) project in the UK, which relied heavily on a CfD, illustrates this challenge.
- The ensuing NPP examples applying a CfD, notably Dukovany and Libiatowo-Kopalino, demonstrate that while CfDs are effective in stabilising operational revenue, they must be paired with targeted construction-phase support to attract private financiers (both debt and equity) in the construction phase and to keep the CfD strike price as low as possible.
- While a revenue mechanism such as a CfD is typically required to enable private refinancing, especially during or shortly after construction, it may not be strictly necessary if the project demonstrates strong operational performance and stable cash flows. However, in most cases, such mechanisms remain essential to attract institutional capital at acceptable terms. Additionally, it must be stated that a CfD does not necessarily need to be in place in the context of a fully publicly project, as exemplified by the Paks II project.
- As CDFs do not offer volume support they work best in large liquid markets. Private investors typically look for the volume risk to be underwritten by large utilities, so combination with PPAs can mitigate other volume and market distortion risks that the volumes of power may have on the Dutch market

Revenue models along the axis of the Decision-Making framework

Revenue model			
Criteria	RAB	CfD	PPA
Impact on debt and balance	– Limits the impact on State debt as it primarily relies on funding via consumers – Revenue during construction reduces need for State-backed financing	– No revenue during construction, increasing reliance on State or investor funding – Possible budgetary implication given market expectations compared to the strike price	– Depends on structure (commercial vs. government PPA) – No revenue during construction phase
Affordability	– Limits capitalised interest and thus capital costs – Positively impacts LCOE	– Does not directly affect LCOE – Indirectly lowers LCOE by reducing market risk and cost of capital	– Indirect impact on LCOE through revenue certainty – Volume guarantees may further reduce risk and financing costs
Feasibility	– Not pursued by the Dutch State (per letter to Parliament). No nuclear precedent in NL or EU – Requires complex and time-consuming regulatory setup	– Preferred method by the EC – Fewer legal/regulatory changes needed – Can be implemented without full framework before construction	– Requires large, creditworthy offtakers – Less regulatory burden than RAB, but more complex than CfD due to the number of PPAs – Given the 10 years + development and construction period, appetite is not yet identifiable. Making it not a viable option from the start.
State control	– Not applicable	– Not applicable	– Not applicable
Risk sharing between State, investors and vendors	– Risk sharing occurs with Consumers which partially bear cost overruns – RAB may lead to moral hazard reducing incentive for cost control	– Risk during construction lies with investors – State support only applies post-commissioning – Additional support (e.g., guarantees) often needed to attract private capital	– Depends on contract structure
EC Approval	– Uncertain: no precedent in nuclear sector	– Aligned with EU Electricity Market Design Directive – Strong precedent for approval	– Generally acceptable if structured as commercial agreements. – Government PPAs may require State Aid notification depending on terms
Market Trust	– Limited: only one precedent (Sizewell C) – Investor confidence not yet established	– Commonly known and used by investors – Used in multiple renewable energy projects	– Depends on counterparty creditworthiness – Commercial PPAs trusted in energy market

Chapter

Management Summary

Introduction

Precedent NPP models used in Europe

Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

Scenario analysis

A person wearing a white hard hat and a high-visibility orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn, with warm lighting from the sky.

A Business Case has been set up for the NPP to assess various assumptions and financing structures

Scenario analysis build further on the DMF and outcomes from the Option Analysis

- This chapter builds on the earlier assessments of the various financing- and revenue models via the DMF. The DMF has served as a guiding structure to evaluate the different options of the option analysis.
 - From the Financing Models, affordability has proven to be the differentiating factor between the different Criteria. As a result, a public heavy capital structure is further explored in the different scenarios assessed within this Scenario Analysis chapter.
 - From the Revenue Models, feasibility has led to the selection of the CfD model as a preferred support measure. As a result, in all presented scenarios from this chapter, a CfD mechanism has been included. The height of the required CfD support mechanism differs between the various scenarios and sensitivities.
- The evaluation of the various scenarios, and their sensitivities, occur based on different parameters, such as the assessment of the Levelized Cost of Energy (“LCOE”) as proxy for Affordability, which are explained in the following pages.

The Business Case assessed in this Report is based on public information

- In order to assess the scenarios and sensitivities a common ground is required with regards to the base assumptions of the NPP, such as its production parameters, price levels and operational costs. Together these assumptions form the Business Case of the NPP (“Business Case”).
- On request of KGG, KPMG has performed desk research to draft a Business Case, reflecting the full lifespan of a nuclear power plant: from development until decommissioning.
- The current Business Case is based on public information assessed by KPMG. KPMG has drafted a Scoping Document (‘20250904 - Project Split - Scoping document’) in which the various parameters, assumptions and sources have been described.

The Business Case assessed in this Report is based on public information (continued)

- The inputs derived in the Scoping document have been discussed with KGG who further conducted a cross-reference on outcomes of the Third-Party Review of the technical/delivery workstream of KGG. KPMG did not have access to this Third-Party Review.
- Note that there has not been a full technical-, operational- or financial assessment of this Business Case.
- The Business Case of the NPP is inherently uncertain in this phase of the project. This is mostly due to the fact that fundamental topics, such as site location, technology provider, and operational fundamentals (availability, load following strategy, prices and inflation rates) are still to be decided. Within these inherent uncertainties, a Business Case, as robust as possible, has been set up in order to be able to conduct financial analyses.
- Changes in assumptions (for example, increases in Capex due to refinement) impacts perceived risk, estimated cash flows and therefore financing options and potential support mechanisms. The current estimates should be considered illustrative, focusing on the impact of various assumptions, and are suited for the assessment as described. Results (e.g. in realised returns as in assumed financing structures) may differ substantially from the projections and assumptions.

Together with the Business Case, the developed Financial Model, forms the basis for the Scenario analysis presented in this chapter.

- To facilitate scenario analysis, the Business Case has been embedded into a Financial Model. This model enables KGG to:
 - Adjust key assumptions and parameters
 - Simulate alternative financing structures
 - Conduct sensitivity analyses across a wide range of variables
- The Financial Model forms the analytical backbone of this chapter. It supports the evaluation of three core scenarios and multiple sensitivities, while also allowing for further exploration beyond the scope of this report.

The fundamentals of the Business Case are subject to refinement in the coming years

Further developments of the project, such as the selection of a vendor and location, will lead to further refinement of model parameters and outcomes

- The Business Case is strongly dependent on essential elements such as site location and chosen technology. In addition to the Business Case fundamentals, the Business Case impacts considerations on other topics, such as:
 - A potential GSP: in case stronger fundamentals can be achieved, less government support may be required;
 - Financial matters such as the appetite of the market (how much are ECAs willing to finance) and the market's view on risk-sharing.
- To reflect the inherent uncertainties in the project at this moment various scenarios are drafted to conduct financial assessments. Given the inherent uncertainties in the Business Case and explorative assumptions on financing, potential equity stakes by private parties or other refinancing options have not been assessed.

Scenarios will be refined by additional information becoming available as well as specific decisions and considerations made by the Dutch State

- Refining scenarios will be an ongoing activity until commissioning which follows the progress of the overall project of building a NPP for the Dutch State.
- Apart from general updates (for example new Capex estimates or changes in long term energy price forecasts) specific topics can impact the set of valid scenarios. For example, feedback on the EMU-budget assessment may impact the view of the Dutch State on private financing and therefore impact foreseen financing structures (debt to equity allocation).
- In addition, market as well as political developments can impact both the drafting of scenarios and how scenarios are compared to the DMF.
- Lastly, preferences of investors may change due to, amongst others, market conditions or (un)successful projects in the sector. A change in these preferences might result in different return expectations or risk appetite of external financiers.

Scenarios show the gradual impact of changes in structure and timing. In addition, sensitivities can be used within scenarios to show impact of changing parameters

- In addition to the scenarios drafted, sensitivity analyses can be performed which show, within a scenario, the impact of changing parameters. For example, assumed Capex, construction timeline, and OPEX levels can be analysed.
- The pages hereafter present:
 - Overview of the topline-to-EBITDA implications and the assumed timelines;
 - The project's rate of return (the return excluding any financing effects) and considerations on a CfD to support debt service and/or increase Return on Equity (RoE);
 - The outline of the scenarios drafted and various sensitivity analyses.
 - Three main scenarios analyses, differing in financing structure and their impact on elements such as capitalised interest, CfD required to cover debt service, RoE and cashflows from and to the Dutch State.

An overview of the driving parameters of the NPP's EBITDA and the timelines considered from developing to decommissioning

Revenue consists of various price and output components

- A NPP generates revenue by selling electricity, calculated as $P \times Q$.
- The price (P) is set as the assumed market price and potentially adjusted through support mechanisms, such as a CfD. The quantity (Q), reflects the electricity output, which depends on the total capacity of the plant, its availability (relating to both planned and unplanned maintenance) and actual production (consisting of the maximum full load hours in a specific period and the hours in which energy is produced).
- Note that the market price is paid by energy off-takers whereas in the case a CfD is applied differences between the market- and a predetermined strike price may lead to a top-up for the NPP. This top-up can be negative depending on whether a “two-way” CfD is applied.

Operating expenses (“Opex”)

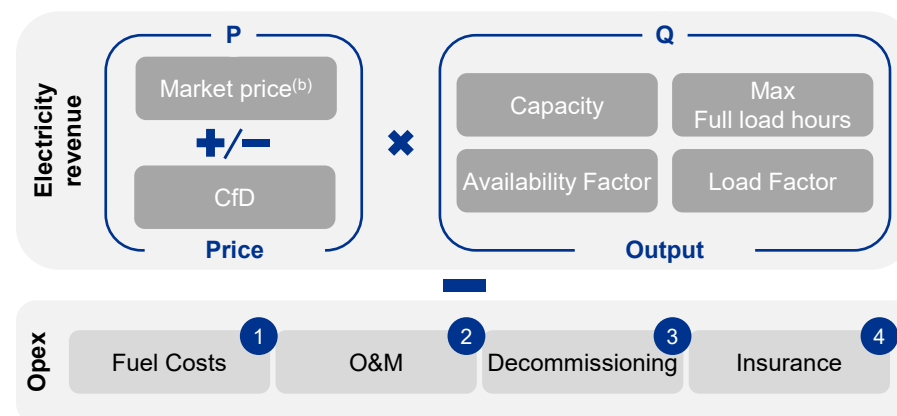
- 1 The NPP requires a continuous supply of (radioactive) fuel to operate, following specific refueling cycles.
- 2 Qualified operational personnel, combined with the need for specific materials is needed to run the reactor safely and efficiently and conduct maintenance to ensure the reactors technical lifetime and reliability.
- 3 Given the plant being a nuclear facility, decommissioning is required under Article 15 sub b – Kernenergiewet. Thus, adequate capital must be reserved to ensure a fully funded decommissioning process.
- 4 Next to general insurances, the NPP requires specific insurance given its activities, according the law (‘Wet aansprakelijkheid kernongevallen article 5 paragraph 1’).

Timeline is indicative and exact timelines are being developed(a)

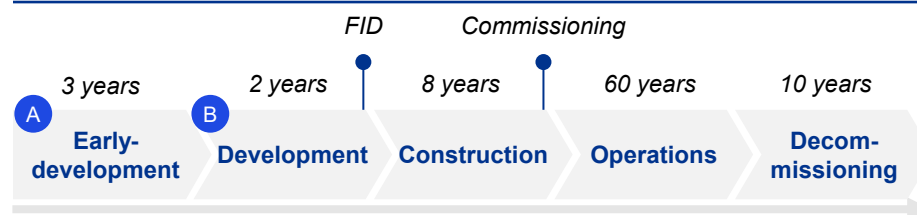
- The development and construction of a nuclear power plant spans many years and involves intricate planning, a resilient supply chain, and large infrastructure to support the scale and complexity.
- Note that given overlapping procedures, scope and relative limited costs compared to the total Capex, early development (or feasibility) and the development phase are hereafter jointly referred to as ‘Development’.
- The NPP is assumed to have a ramp-up period of 2 years (after construction), operate for 60 years, after which a decommissioning period of 10 years is planned.

Notes: (a) Kamerbrief KGG met kenmerk 98794225: “Voortgangsbrieff nieuwbouw kernenergie mei 2025”; (b) Market price is the wholesale price at which the NPP sells its generated electricity.

EBITDA breakdown



Indicative timeline assumed for financial analyses



Procedures of early development and development tend to overlap such as:

- A I.e. tender process, feasibility studies, public enquiry, initial permitting, market consultation, early-stage project development, and preliminary engineering
- B Detailed design, engineering, final permitting, financial structuring, and preparation for FID

Early development and development are therefore jointly referred to as ‘Development’

The Project IRR is 3.9%, while revenue support increases the IRR, this support may also lead to inefficient cash circulation

The NPP is cash flow positive on a standalone basis, resulting in a 3.9% Project IRR

- The project's Internal Rate of Return ("Project IRR") indicates the discount rate required to calculate a net present value ("NPV") that is equal to zero. In other words, what discount rate would result in the sum of all future cash flows to be zero. By conducting this calculation, insights are obtained with regards to the return of the asset, not impacted by any financing structures. The assessments result in a Project IRR of 3.9%.
- The visual on the right indicates the estimated free cash flows (in terms of Enterprise Value), the cumulative free cash flows as well as EBITDA margins over time. The Business Case indicates an expected EBITDA margin of approximately 55-60%, without any support mechanism.

Revenue support mechanisms can boost the Project IRR and/or cover debt. With full public financing, this may lead to inefficient recycling of funds, because support flows back to the State as project proceeds

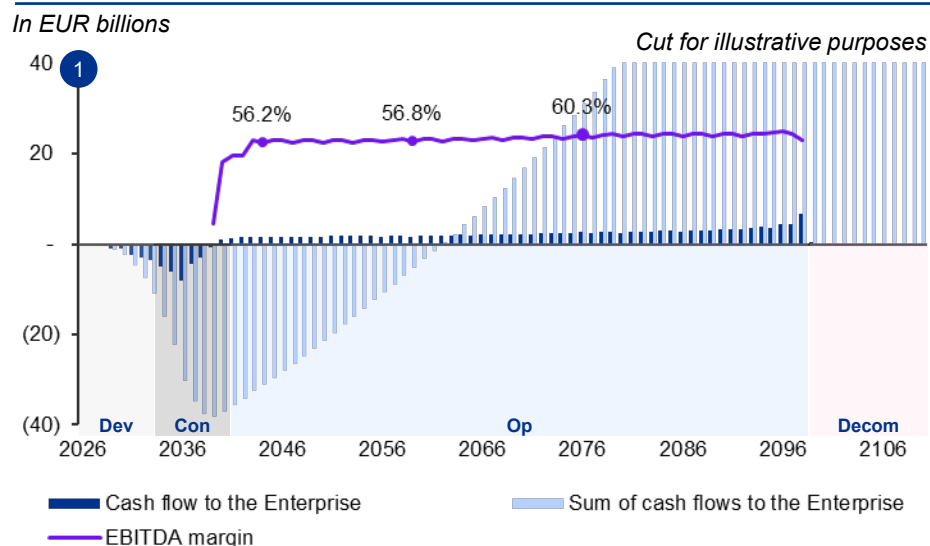
- Project IRR (3.9%) is below typical investor thresholds and likely lower than market-based Weighted Average Cost of Capital ("WACC").
- Debt (public or private) requires sufficient coverage to avoid default. A Debt-Service-Coverage-Ratios ("DSCR"), which compares a project's available cash flow to its debt service, serves as a key financial metric that lenders use to assess repayment capacity and build a buffer against cash flow shortfalls.
- Support mechanisms like a CfD can improve returns and debt coverage.
- Introducing a CfD increases revenues, improving Project IRR and coverage of debt service. If fully State-backed, higher cash circulation occurs, via dividends and taxes, while the net financial impact for the Dutch State remains unchanged.

1 Model parameters

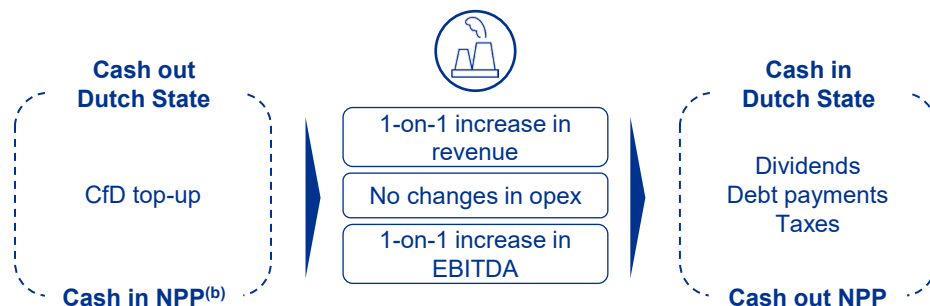
- Important parameters for the NPP are the total real Capex of EUR 30 billion^(a), the assumed market price of EUR 75 MWh, an inflation of 2%, the availability of 90% and load factor of 100% (resulting in 90% realised output).

Note: (a) EUR 30 billion in 2025 terms (real). The total amount in nominal terms, which includes inflation of 2% per annum, amounts to approximately EUR 36 billion, excluding net working capital investments or ramp-up period funding. (b) The reverse scenario I is also possible: if the market price exceeds the strike price, the NPP pays the difference to the Dutch State.

Cash flow overview over project's lifetime



Support mechanism: Cash flows from and back to the Dutch State



Opting for a specific allocation of debt and equity impacts the LCOE and return on equity and may require support of a CfD

Specific characteristics in debt sources (tenor, rates, commitment amount and timing) are assumed to reflect differences in debt financier and debt types

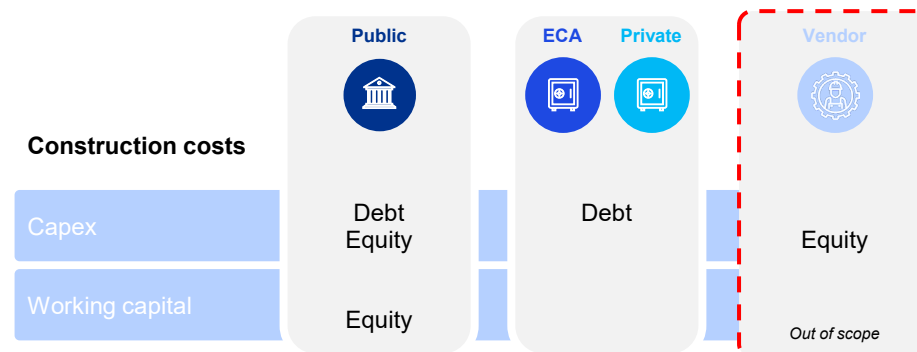
- Apart from equity financing, which is in the current scenario analysis assumed to be invested in full by the State^(a), both public and private debt is included in the analyses. Private debt is split in ECAs and Senior debt (banks, pension- and infrastructure funds).
- To reflect different characteristics between public and private debt, assumptions are made on elements such as total commitment, commitment date, interest rate, interest capitalisation, arrangement fee and commitment fee.
- Repayments are done on a pari-passu basis and follow similar tenors, starting after the grace period based on the ramp-up period (i.e. 2 years after COD).
- Note that this is a simplification and financing specifics depend on specific market preferences which can differ over time and are the outcome of negotiations.

Specific financing structures, allocating equity and debt, are defined in various scenarios. Three scenarios and multiple sensitivity analyses are assessed

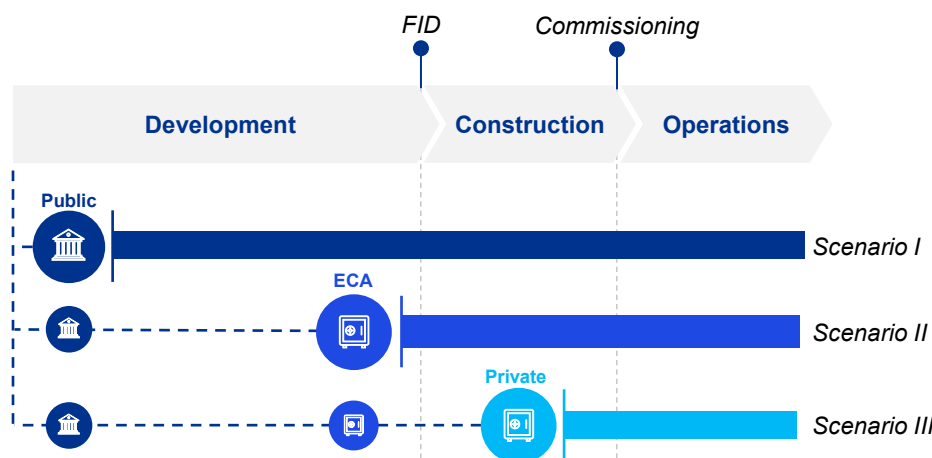
- **Scenario I (Full public Scenario)** assumes a project fully financed by the State^(b). In the page hereafter analyses have been conducted on various financing structures to conclude on a specific allocation set as Scenario I. Sensitivities on the Capex-, revenue, Opex- and financing assumptions are conducted on Scenario I. A separate analysis is also included on the assumed load factor.
- **Scenario II and III (ECA; ECA + Senior debt scenario)** consider attracting private debt by including ECA financing (Scenario II) as well as both ECA financing and Senior debt (Scenario III). ECAs are assumed to commit at FID whereas Senior debt is attracted at a later stage. Senior debt is assumed to need government guarantees but no additional pricing for those is included.
- Note that given the inherent uncertainties and phase of the project, calculations are conducted to assess parameters, such as LCOE and RoE. Substantial changes may arise depending on the GSP and capital structure assumptions.
- In all scenarios the project is assumed fully financed. Capitalisation of interest and financing working capital may cause differences in total Debt / Equity assumed. Refinancing has not been included in the scenarios assessed.

Note: (a) This assumption does not preclude further exploration of (private) equity financing, such as by Vendors, by the Dutch State. As stated in the parliamentary letter (Kamerbrief KGG, kenmerk 98794225: "Voortgangsbrieven kernenergie mei 2025"), equity financing is being considered. However, reports such as the Market Consultation by BNP Paribas and the Third-Party Review by Amentum indicate limited market appetite and uncertainty around project risk transfer with such participation. Equity would furthermore be most likely capped and require substantial (guaranteed) returns; (b) i.e. all Capex and required investments are covered.

Overview type of capital contributions



Overview of timing of capital commitments



The following analysis evaluates each scenario using four key performance indicators

The various scenarios can be distinguished based on four key metrics that reflect their sensitivity to changes in underlying assumptions: Capex, construction time, capital structure (debt/equity), and private financing

Capitalised Interest

Capitalised interest represents the interest costs incurred during the development and construction phase—before the project becomes operational and begins repaying its debt. In the absence of a revenue stream, these costs are added to the overall capital cost of the project, instead of being treated as an immediate expense. Capitalised interest is expressed in EUR terms.

This treatment has a direct impact on the project's financial structure: by increasing the total debt at Commercial Operation Date (COD), capitalised interest raises the amount that must be repaid during the operational phase. Consequently, it contributes to a higher overall project cost.

LCOE

Levelized Cost Of Energy provides an estimate of the average cost of electricity over the full life span (including construction) of the NPP. In other words: the outcome represents the energy price (in real terms, 2025) on which it will break even. Note that the calculation includes production and is expressed in EUR/MWh. LCOE is discounted using the Project IRR where the NPV = 0 (e.g. 3.9% in Scenario I). Note that any impact on the Business Case (e.g. higher Capex) will cause a shift in Project IRR in order to balance the NPV to 0. However, in order to illustrate the impact of sensitivities on the LCOE, a fixed discount rate of 3.9% (rounded) is applied, similar to the Project IRR in Scenario I. For all other scenarios or calculations, the LCOE is calculated based on its own Project IRR. Please refer to the next page for additional considerations on LCOE.

As NPPs have high upfront (capital) costs, often a large portion of the LCOE is the result of the capital costs, such as the capitalised interest. Accordingly, the LCOE, in the following pages, follows the changes in capitalised interest.

CfD

A Contract for Difference (CfD) is a financial mechanism used to support investment in low-carbon electricity generation by providing price stability to electricity producers. A CfD provides revenue support to the project by supplementing the difference to the market price and an agreed strike price for the project's output.

From the NPP's perspective, the CfD serves as a top-up to restore viability when the Business Case weakens (e.g. in the case of an increase in cost of capital). The top-up price acts as a proxy for the market price the project requires to fulfill its obligations. In real-life application, however, CfDs only cover market price risk, and is based on a predetermined, and agreed upon, strike price, independent of the changes in the underlying Business Case.

RoE

A Return on Equity (RoE) refers to the return that equity providers realise based on the cash flows available for equity (dividends) in relation to the amount of cash provided by the equity holders (amount of Capex provided by equity). It is assumed that there is no required target RoE. The RoE is expressed as a percentage.

RoE is influenced by the amount and timing of cash flows available to equity holders. The greater and earlier these positive cash flows occur, assuming capital expenditures financed by equity remain constant, the higher the resulting RoE. A higher RoE can also be reached by a higher CfD strike price. As long as the State is the only equity holder, this will mean an increase in cash circulation (as described on the previous pages).

The Levelized Cost of Energy is driven by both the underlying business case and the discount rate

Changes in capital structure influence the IRR through the CfD methodology

- The Levelized Cost of Energy (LCOE) serves as a key metric in evaluating the economic viability of energy projects, reflecting the average cost per unit of electricity generated over the project's lifetime, adjusted for the time value of money.
- Choosing an applicable discount rate for the LCOE calculation normally occurs on a market-based approach. In other words, a Weighted Average Cost of capital ("WACC") is applied based on market benchmark data of similar projects. However, similar NPP projects, such as those presented in the earlier cases, present a broad range of discount rates applied, strongly depending on considerations on the sources of financing and their cost. Moreover, nuclear new builds could be considered inherently less suitable for a market-based WACC given that these projects generally require funding support from government bodies. In light of this project and in agreement with KGG the Project IRR has been applied in the calculation.
- The Project IRR is derived by goal-seeking the required discount rate to arrive at an NPV of 0. The Project IRR represents the return available to both equity and debt providers and serves as a reflection of the project's risk profile. A lower IRR compared to market benchmarks may indicate that investors must accept below-market returns or that the project carries significantly lower risk. Generally, capital structure does not affect the Project IRR, as the calculation is based on enterprise value cash flows (those available to all capital providers) making the IRR independent of the debt-equity split. Accordingly, similar IRRs are expected across scenario analyses.
- Note that specific developments, such as higher CAPEX during the construction phase, could occur, impacting the business case and therefore Project IRR. For example, when higher CAPEX levels are considered, the Project IRR would decrease as the initial investment is higher and cash flows available for distribution are not impacted. However, for obtaining a LCOE applying this lower discount rate this would mitigate the higher CAPEX cost, which would dilute the insights and be theoretically incorrect.

Changes in capital structure influence the IRR through the CfD methodology (continued)

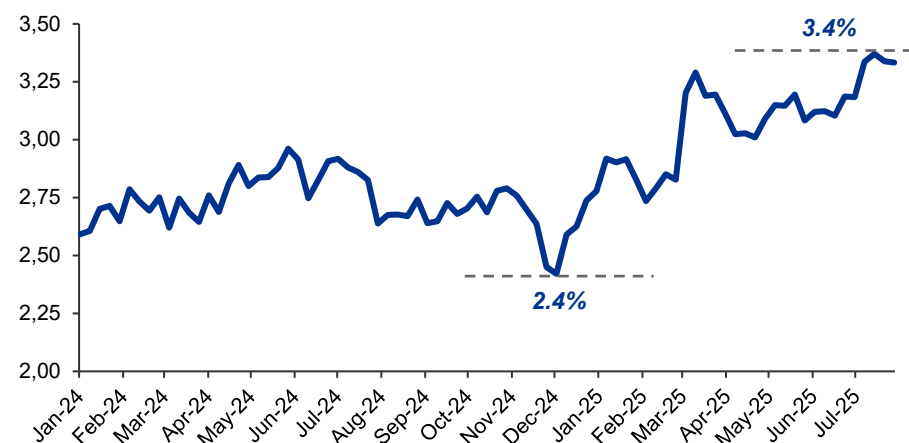
- In addition, the CfD methodology applied in the scenario analyses balances shortcomings in the business case's debt service by increasing revenue.
- In order to visualise the impact of sensitivities on the Business Case, such as on Capex, inflation rates and Opex, we deem it more appropriate to apply a constant discount rate in the LCOE calculation, which in the scenario analyses would be the Project IRR.

The risk-free rate may fluctuate substantially, and accordingly affect the debt servicing capacity of the project

The developments in risk-free rate may significantly influence the debt service capacity of the project

- In order to ensure the considerations with regards affordability in the DMF, the methodology as applied in the Dukovany case is followed, which indicates:
 - An interest rate of 0% is considered on government debt pre-COD;
 - A long-term government bond is applied as a basis for the debt costs post-COD, including a 1% premium.
- By following this methodology, the Dutch 30-year government bond yield, which reflects the State's borrowing cost, is applied and serves as a proxy for financing cost post-COD.
- The graph on the right illustrates how the risk-free rate developed between August 2024 and August 2025. Indicating a low at 2.4% and high at 3.4%.
- Changes in the risk-free rate may affect economical viable capital structures. A higher risk-free rate, and therefore higher interest rate on loans post-COD, may exceed the debt servicing capacity of the Business Case and therefore require support, for example, via a CfD mechanism with a strike price higher than the projected electricity price.
- On the page hereafter considerations with regards the assumed interest costs and capital structure are elaborated on. In addition, a specific capital structure is defined for Scenario 1 which will serve as a basis for the sensitivity analyses and Scenario 2 and 3.

Development risk-free rate (30Y Dutch State) between 01/08/2024 – 01/08/2025



Scenario I has been defined as a 60/40 debt to equity structure, considering interest costs of 0% pre-COD and 3.75% post-COD

A 60/40 Debt/Equity ratio is the threshold for which the NPP does not require a revenue support mechanism to cover the debt servicing

- Table 1 shows various capital structures (allocations of specific debt and equity relative to the base Capex-estimate) being assessed and their impact on the elements described on the previous page.
- In addition to the Business Case fundamentals outlined in the Scoping document, a brief note is provided on the financing assumptions below the table. All capital structures assume 0% interest pre-COD, meaning no capitalised interest occurs, and 3.75% interest post-COD.
- The top of table 1 shows that the LCOE gradually increases when additional debt is assumed in the capital structure, resulting from additional interest costs (i.e. 3.75% interest costs post-COD over a higher debt position).
- All scenarios and sensitivities assume a CfD contract is in place. While most scenarios show a zero expected value (indicating a CfD strike price equal to the market price, and thus no top-up), capital structures with a higher Debt/Equity ratio, such as 70/30 and 98/2, require active CfD support (strike price > market price). An indication of both the average height of the CfD (in EUR / MWh) as well as the number of periods (in quarters) the support is required are shown in the table.
- The RoE gradually increases from the Project IRR of 3.9% (which can be mimicked as a 100% equity scenario). Note that despite increasing interest costs the RoE increases as the total amount of dividends are slightly lower (due to increased interest cost) but offset by a lower equity base (given the capital provided by debt) on which the RoE is calculated. RoE is a result in the financial analyses, and no specific target RoE is considered.
- Scenario I:** the capital structure with a 60/40 Debt/Equity ratio is defined as this capital structure indicates no CfD strike price above the assumed market price is required under the current Business Case while allocating as much debt as possible, in light with the State's preference for debt instruments (as it provides more repayment certainty) and to avoid unnecessary cash circulations between government bodies and NEO. Scenario I is highlighted in blue.
- The bottom of table 1 indicates the sensitivity while varying risk-free rates. Showcasing that higher risk-free rates, may require the need for a CfD with a strike price above the assumed market price.

Sensitivity analysis - Capital structure - Public financing

EUR m	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
1 0% interest pre-COD				
0/100 Debt/Equity	-	72	0 (0 quarters)	3.9%
30/70 Debt/Equity	-	76	0 (0 quarters)	4.1%
40/60 Debt/Equity	-	78	0 (0 quarters)	4.3%
50/50 Debt/Equity	-	79	0 (0 quarters)	4.4%
60/40 Debt/Equity	-	81	0 (0 quarters)	4.5%
70/30 Debt/Equity	-	83	6 (20 quarters)	4.9%
98/2 Debt/Equity	-	94	17 (60 quarters)	8.6%
Sensitivities on post-COD interest costs on 60/40 D/E				
2.75% interest rate post-COD	-	79	0 (0 quarters)	4.8%
3.75% interest rate post-COD	-	81	0 (0 quarters)	4.5%
4.75% interest rate post-COD	-	84	4 (20 quarters)	4.3%
5.75% interest rate post-COD	-	87	11 (20 quarters)	4.2%

Table 1. Note: the LCOE for the scenarios 70/30 and 98/2 have been calculated using their respective Project IRR of 3.93% and 4.37%.

1 Specific financing assumptions

- Interest costs are aligned with the Dukovany case as described on the previous page: public financing assumes 0% interest pre-COD and a 30-year tenor post-ramp-up. Post-COD interest is 3.75, including a 1% premium.
- For RoE calculations, all free cash flows to equity are distributed (cash sweep).
- With public financing, a DSCR of 1 is assumed.

2 CfD calculations

- The average annual output is ~**25 million MWh**.
- In case a 70/30 D/E would be assumed, the average CfD is **EUR 6 MWh**.
- This would result in a CfD top-up of **EUR 150m** (in 2025 real terms) for 4 quarters.

Assuming interest cost pre-COD triggers the capitalisation of interest and increases the LCOE and potential need for a CfD

In case pre-COD interest cost are assumed, capitalised interest will be included in the project's total costs, increasing the LCOE due to interest and increasing the potential need for a CfD both in periods required and strike price

- Table 2 reflects the impact of including pre-COD interest cost of 3.75%, resulting in capitalised interest. Capitalising interest is required given that NPP does not generate cash to pay interest. Interest is accrued and capitalised as part of the total project's cost. By capitalising interest, the debt principal increases, leading to higher repayments and elevated interest costs throughout the project's lifetime.
 - As noted earlier, the blue-highlighted row marks Scenario I. With interest included, 60/40 D/E becomes the tipping point where a CfD is required due to increased debt servicing.
- LCOE is impacted due to two compounding effects:
 - Timing effect – Capitalised interest occurs earlier in the project timeline and is therefore discounted less, increasing the present value of costs.
 - Cost effect – Capitalisation increases the debt principal, resulting in higher interest payments over the project's lifetime, further raising total costs.
- The timing effect is visible in both tables. 60/40 in the first table, shows support upfront by 0% interest pre-COD, required less support later, i.e. no CfD. Following the second table, 60/40 with interest costs upfront, results in more support in a later stage, by a CfD. This is particularly relevant in structures with higher leverage.
- The cost effect is visible in the first table, how rising debt increases LCOE, by more interest payments over the lifetime, as no interest is paid pre-COD. However, LCOE is not directly tied to CfD need: e.g., a LCOE of EUR 83 MWh (table 1) requires CfD, while EUR 84 MWh (table 2) does not require a CfD. This reflects the difference in metrics, LCOE includes discounting and the CfD is based on cash flows. Interest payments and especially debt repayments, impact CfD more heavily than LCOE.

Sensitivity analysis - Capital structure - Public financing

EUR m	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
0% interest pre-COD				
0/100 Debt/Equity	-	72	0 (0 quarters)	3.9%
30/70 Debt/Equity	-	76	0 (0 quarters)	4.1%
40/60 Debt/Equity	-	78	0 (0 quarters)	4.3%
50/50 Debt/Equity	-	79	0 (0 quarters)	4.4%
60/40 Debt/Equity	-	81	0 (0 quarters)	4.5%
70/30 Debt/Equity	-	83	6 (20 quarters)	4.9%
98/2 Debt/Equity	-	94	17 (60 quarters)	8.6%

Table 1

Sensitivity analysis - Capital structure - Public financing

EUR m	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
1 3.75% interest pre-COD				
0/100 Debt/Equity	-	72	0 (0 quarters)	3.9%
30/70 Debt/Equity	1,755	79	0 (0 quarters)	4.0%
40/60 Debt/Equity	2,340	81	0 (0 quarters)	4.1%
50/50 Debt/Equity	2,925	84	0 (0 quarters)	4.1%
60/40 Debt/Equity	3,510	87	5 (20 quarters)	4.3%
70/30 Debt/Equity	4,094	91	9 (40 quarters)	4.6%
98/2 Debt/Equity	5,849	110	29 (60 quarters)	8.6%

Table 2

1 Considerations risk-free rate

- As mentioned on the page before the long term 30-year Dutch Government Bond is applied as basis for the interest cost on which a 1% premium is added. Given the volatility in risk-free rates, two effects are impacted by changes in the applied rate (and/or premium) i) Direct interest costs post-COD and ii) indirect cost in case pre-COD interest is assumed given the impact on total debt at COD due to capitalised interest;
- In case only post-COD interest is considered, as precedent in the Dukovany case, only the first effect is relevant.

Sensitivity analyses are conducted, indicating the impact of assumptions on Capex, Revenue, Opex and Financing (1/4)

Sensitivity on Capex, Revenue, Opex and Financing provide insights on the impact of assumptions of specific parameters

- The current Business Case is, as previously described, inherently uncertain given the current phase of the project. In order to reflect on potential changes in Business Case assumptions and financing structures multiple sensitivity analyses have been conducted. In the pages hereafter the following elements are assessed:
 - Capex: apart from changes in direct Capex estimates, specific inflation on Capex (construction inflation) and potential delays are included in the analyses;
 - Revenue: both the average energy price (in 2025 terms) assumed and indexation due to inflation are assessed;
 - Opex: fluctuations in Opex (in terms of EUR/MWh) are assessed;
 - Financing: assumptions on the tenor and interest rates of the debt are assessed.
- All sensitivity analyses are based on Scenario I (fully public financing) which is highlighted in light blue. The impact of the sensitivities conducted would present a similar or increased impact for Scenario II and Scenario III as private financing assumes higher costs interest rates.
- On this page, first the sensitivities on Capex are assumed.

Construction cost variations substantially impact the LCOE, required CfD and lower the Project IRR, highlighting the sensitivity to Capex levels

- In table 3 sensitivity analyses are shown on Scenario I by differing:
 - **Increased inflation:** The increase specifically relates to Capex inflation (pre-COD) and is increased from 2% to 4%, compared to Scenario I.
 - **Increased Capex estimate:** This sensitivity assumes an increase in Capex of EUR 10 billion in addition to the EUR 30 billion Capex in Scenario I. The increase in Capex is distributed pro-rata over the full period until COD.
 - **Delayed COD:** The COD (commissioning date) is delayed by 5 years in this sensitivity. When the COD is delayed, additional Capex is subject to inflation, increasing its nominal value. Moreover, any outstanding debt positions which are subject to interest costs pre-COD will increase due to capitalised interest.

Notes: (a) The CPI has been retrieved via: CBS and CAGR calculated as the CPI grew from 100 (prices in 2015) 126,09 (prices in 2023). Calculation: $((1,2609/1)^{(1/8))}-1$. (b) For construction prices the construction of newbuild housing index is applied. In this case, the CAGR is obtained by following a similar approach as for CPI but applying the higher index of 134,2.

Scenario I - Capex assumptions

EUR m, Development and construction inflation	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
EUR 30b Capex and 2% inflation	-	81	0 (0 quarters)	4.5%
+ 2% Capex inflation (4% total)	-	90	7 (20 quarters)	3.9%
+ EUR 10b Capex cost overrun	-	110	20 (40 quarters)	3.0%
EUR 30b Capex and 2% inflation	-	81	0 (0 quarters)	4.5%
+ EUR 10b Capex cost overrun	-	98	8 (40 quarters)	3.5%
+ 5 year delay	-	103	9 (20 quarters)	3.5%
+ 2% Capex inflation (4% total)	-	117	15 (40 quarters)	3.0%
EUR 30b Capex and 2% inflation	-	81	0 (0 quarters)	4.5%
+ Pre-COD interest of 3.75%	3,510	87	5 (20 quarters)	4.3%
+ EUR 10b Capex cost overrun	4,688	105	19 (40 quarters)	3.4%
+ 5 year delay	10,766	118	17 (60 quarters)	3.2%
+ 2% Capex inflation (4% total)	12,634	134	24 (80 quarters)	2.8%

Table 3

- As shown in the various sensitivities estimated the calculated parameters are sensitive to direct increases in Capex assumptions. Considering a higher inflation (for example, because a difference exists between general or consumer prices inflation and specific construction inflation) would lead to an introduction of a CfD. The CPI (Consumer Price Index) in the period 2015-2023 grew on a CAGR of 2.9%^(a), whilst the inflation related to construction grew with a CAGR of 3.7%^(b).
- In order to analyse the impact in case interest costs of 3.75% are considered pre-COD, a specific sensitivity is included. This sensitivity is combined with all previously mentioned sensitivities (higher inflation, higher base Capex, delayed COD). Capitalised interest increases substantially as well as the LCOE, the required CfD (both length and height) and sharp decline in RoE.
- On the next page the sensitivity analyses with regards to revenues are elaborated on.

Sensitivity analyses are conducted, indicating the impact of assumptions on Capex, Revenue, Opex and Financing (2/4)

Assumptions on expected electricity prices have a large impact on the Business Case, reflected by the need for revenue support and resulting RoEs

- In the analysis of Scenario I, an electricity market price of EUR 75 MWh is assumed. This price is slightly below the European Energy Exchange (EEX) reference price of EUR 81 MWh as of August 20, 2025. Given the inherent volatility of electricity market prices, a sensitivity is carried out on different prices.
- In table 4 sensitivity analyses are shown on Scenario I by differing on the applicable inflation and electricity prices (in 2025 terms):
 - **Decreased inflation:** The decrease specifically relates to electricity price inflation and is decreased from 2% (in Scenario I) to respectively 1% and 0%;
 - **Electricity prices assumed:** Electricity prices (in 2025 terms) are increased to EUR 100 MWh and decreased to EUR 50 MWh in relation to the EUR 75 MWh assumed in Scenario I.
- As shown in the sensitivity analyses conducted there are big differences compared to Scenario I on the CfD required and the resulting RoE. Note that capitalised interest is not impacted given Scenario I, and in the abovementioned sensitivities, no interest cost pre-COD are assumed.
- In addition, the impact of these sensitivities on the LCOE is limited. The cost fundamentals of the Business Case remain unchanged (e.g. Capex, Opex and financing costs). The marginal differences are the result of the usages of the tax asset (tax loss carry forward).
- Any decrease in either inflation, or electricity prices assumed result in the need for a CfD. Moreover, both the height of the CfD as well as the period in which the CfD is applicable substantially fluctuate.
 - **In the sensitivity of 0% revenue inflation and EUR 75 MWh** market price, a CfD is required over almost the full operational period (60 years, 240 quarters) to cover debt service. In addition, the height of the CfD is substantial with EUR 26 MWh (e.g. average of EUR 670m per year in 2025 real terms). Due to the weakened Business Case, which requires substantial revenue support through a CfD, no dividends are available for equity providers. As a result, the RoE is insignificant and therefore considered 'non-meaningful'.

Scenario I - Revenue inflation and market price

EUR m	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
2% inflation and EUR 75 MWh	-	81	0 (0 quarters)	4.5%
0% inflation and EUR 75 MWh	-	83	26 (232 quarters)	n.m.
1% inflation and EUR 75 MWh	-	82	10 (60 quarters)	1.1%
2% inflation and EUR 50 MWh	-	82	17 (80 quarters)	2.1%
2% inflation and EUR 100 MWh	-	80	0 (0 quarters)	7.1%

Table 4

Assumptions on expected electricity prices have a large impact on the Business Case, reflected by the need for revenue support and resulting RoEs (continued)

- **In the sensitivity with 1% revenue inflation and EUR 75 MWh** market price, a CfD is still required, although at a lower level and for a shorter duration. Despite this improvement, compared to the sensitivity above, the RoE remains significantly lower than in Scenario I, as dividends are both reduced and deferred.
- **In the sensitivity of 2% revenue inflation and EUR 100 MWh** market price, the RoE increases substantially from 4.5% to 7.1% as a result of higher cash flows available for dividends.

Sensitivity analyses are conducted, indicating the impact of assumptions on Capex, Revenue, Opex and Financing (3/4)

LCOE is only marginally affected by Opex, as these costs occur relatively late in the project timeline and are marginal compared to Capex

- The Opex assumption, of EUR 29 MWh (in 2025 prices) forms the basis for Scenario I. The Opex is indexed annually at 2%, in line with the revenue (market price) indexation. Although CfDs typically do not cover increases in Opex, a sensitivity table (table 5) illustrates the impact that increases in Opex have on the Business Case and required revenue support.
- Relative to Capex, Opex, are incurred later in the project lifecycle. Consequently, its impact on LCOE is relatively limited due to the stronger discounting effect applied to cash flows that occur in the future.
- **In the sensitivity with an increase in Opex of EUR 29 MWh to EUR 40 MWh**, the LCOE increases from 81 to 94, and a CfD is required for a period of 10 years. After this period, the Business Case is sufficient to sustain the higher Opex without additional revenue support.

Capital structure choices drive trade-offs between LCOE, CfD, and overall project economics

- Scenario I includes a 60/40 D/E capital structure, with 0% interest pre-COD, and 3.75% post-COD, with a repayment tenor of 30 years, which is aligned with the Dukovany case.
- **In the sensitivity of a 20-year debt repayment tenor (table 6)**, total interest costs are lower (impact on interest of ~EUR 4 billion, not shown), resulting in a lower LCOE. However, it also increases required debt servicing capacity in the years after COD, as the same nominal amount (from Scenario I) must be repaid in a shorter period.
- These higher debt service requirements lead to a requirement for CfD support in the first 5 years after COD, highlighting a trade-off between LCOE and CfD requirement when applying different tenors.

Scenario I - Operating expenses assumptions

	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
EUR 25 MWh	-	77	0 (0 quarters)	5.0%
EUR 29 MWh	-	81	0 (0 quarters)	4.5%
EUR 35 MWh	-	88	6 (20 quarters)	3.7%
EUR 40 MWh	-	94	9 (40 quarters)	3.2%

Table 5

Scenario I - Capital structure assumptions

EUR m	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
0% Pre and 30y tenor	81	0 (0 quarters)	4.5%
20y tenor	79	9 (20 quarters)	4.6%

Table 6

- In summary, shortening the government debt tenor from 30 to 20 years increases pressure on the project's debt servicing capacity. While the nominal debt amount remains unchanged, the accelerated repayment schedule necessitates CfD support in early years. However, faster repayment reduce total interest costs over the plant's lifetime, resulting in a lower LCOE
- In essence, more secure cash inflows to the Dutch State through accelerated or more debt repayments increase the need for revenue support

Sensitivity analyses are conducted, indicating the impact of assumptions on Capex, Revenue, Opex and Financing (4/4)

Minimal input and high availability make NPPs ideal for baseload, but reduced output quickly raises costs

- Nuclear energy requires minimal fuel input and can operate continuously, unlike weather dependent renewables. This enables steady electricity generation and allows Capex to be efficiently spread over a high output. Any reduction in generation immediately raises the cost per MWh, making downtime financially inefficient.
- The evolving electricity market may challenge the NPP's baseload role. With increasing renewable penetration and shifting demand patterns, the plant's function in the energy system, in 15 years from now, is not given.
- Scenario I assumes 90% availability and 100% load factor. Market uncertainties and growing renewable penetration may challenge these assumptions.
 - Availability reflects the time the plant is technically able to operate, the load factor captures actual output. Load-following implies the plant is deliberately run below full capacity despite being available.
- In table 7 a sensitivity has been carried out for load-following in the summer months (Q2 and Q3), decreasing energy output (load factor 50%), when availability from renewable energy is plenty and maintaining a load factor of 90% in Q4 and Q1.
- The market price is assumed to be EUR 75 MWh during Q1 and Q4. In Q2 and Q3, a capture price is applied, measured as a multiple over the base assumption on electricity of EUR 75 MWh. The NPP is assumed to produce electricity during hours with higher prices and shut down when prices are low (dispatching). While load adjustments are technically complex and economically inefficient, and typically only feasible over longer periods with advance planning, the sensitivity analyses is conducted for illustrative purposes.
 - Given the NPP's largely fixed cost base, a load following strategy, that captures higher prices, requires efficient operating performance.
 - In practice, reduced output could partially be offset by grid balancing fees, which compensates the NPP for adjusting supply to support system stability.
- This sensitivity does not assess the reasons for load-following, it focuses solely on the financial impact of reduced output.

Sensitivity analysis - Load following in Q2 and Q3 at 50% output

EUR m	LCOE	Average CfD	RoE
0% interest pre-COD	(EUR/MWh)	(EUR/MWh)	
No load following	81	0 (0 quarters)	4.5%
Assumed capture price factor 1.0x	106	14 (60 quarters)	2.9%
Assumed capture price factor 1.5x	105	8 (20 quarters)	4.0%
Assumed capture price factor 2.0x	104	0 (0 quarters)	5.1%
Assumed capture price factor 2.5x	104	0 (0 quarters)	6.3%

Table 7

Reduced output in Q2 and Q3 necessitates higher capture prices in those quarters which could be realised by effective dispatching

- Table 7 shows the assumed capture price factor during Q2 and Q3.
- The assumed availability factor remains unchanged, reducing realised generation (over the project's lifetime) from 90%, in Scenario I, to 67% in the load following sensitivity due to lower production in Q2 and Q3. The overall reduced output leads to an increase in LCOE (i.e. the total costs are spread over lower volumes, increasing the cost per volume).
- With an assumed capture price between 1.0x and 1.5x, a CfD is required to compensate for the reduced debt servicing ability of the NPP.
- To achieve the same RoE with reduced output as in Scenario I, a capture price in Q2 and Q3 must be at least between 1.5x – 1.75x.
- Note that doubling the capture price while operating at 50% load factor does not yield the same financial results as Scenario I, this is due to lower Opex, which is partly variable costs in the Financial Model.
- As previously mentioned, please note that this sensitivity analysis is highly indicative and for illustration purposes only.

Scenario II and III are defined by additional financing via Export Credit Agencies and Senior Debt providers

In addition to Scenario I, which considers a fully public financed project, additional scenarios are defined by including financing from Export Credit Agencies and senior Debt providers such as banks and pension funds

- Alternative financing provided by ECAs and Senior Debt providers (jointly referred to as private capital), such as traditional banks, pension funds, infrastructure funds, may alleviate the required investments for the Dutch State in the construction period. However, this comes at a cost:
 - Capitalised interest:** private capital requires interest remuneration on the loaned principal. In the construction period no cash is generated by the entity and interest is accrued and capitalised. This capitalised interest is added to the principal and adds to the total debt position outstanding at COD on which interest is owed;
 - LCOE:** interest cost are part of the LCOE, which will therefore increase. In addition, due to required CfD support the businesscase strengthens, resulting in a higher discount rate where the NPV = 0, and therefore increasing the LCOE.
 - Average CfD:** Debt service will increase and may result in additional revenue support required to cover the DSCR, which is higher than in a fully publicly financed project;
 - RoE:** RoE is influenced by contrasting dynamics. Private capital reduces the State's absolute debt and equity contributions, concentrating dividends over a smaller equity base, amplifying RoE. Conversely, higher debt servicing requirements (due to the higher cost of capital of private capita) reduces cash available to shareholders. When revenue support mechanisms, such as a CfD, secure debt payments, the overall impact on RoE is typically positive due to the reduced equity base.
- Refer to the right for an elaboration on the financial assumptions underlying the analyses. Scenario II considers ECA financing. Scenario III considers both ECA and Senior Debt financing. In addition, attracting SD only is included as intermediate step.
- As previously described it is important to provide insights on the total costs of private capital as well as cash outflows of the Dutch State to support attracting private capital (the CfD). On the page hereafter first, an overview is provided of the project's Sources and Uses, in which the cash flows from Scenario I, II and III are presented.

Scenario I (fully public financed)

EUR m	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
Public financing only	-	81	0 (0 quarters)	4.5%
II + EUR 5,000m ECA (5%)	1,284	88	17 (40 quarters)	5.0%
+ EUR 5,000m SD (8%)	814	90	20 (40 quarters)	4.9%
III Combined	2,098	98	25 (60 quarters)	5.4%

Table 8. Note: the LCOE is calculated based on each scenario's own Project IRR. The Project IRR Public Financing only is 3.9%, of ECA only is 4.2%, SD only is 4.3% and Combined is 4.6%.

Financial assumptions underlying Scenario II and Scenario III:

- Commitment date:** ECA debt is assumed to be committed at FID, approximately 10 years before COD. Senior debt is assumed to be committed near the end of construction, approximately five years before COD.
- Commitment:** EUR 5 billion is assumed for both ECA and SD. These commitment values are based on recent transactions in the nuclear sector and previous reports. The figures assumed are indicative. More certainty on the reasonability of the values would require market consultation.
- DSCR:** For private capital a higher DSCR of 1.2x is assumed. Note that this DSCR considers all debt, including government debt.
- Interest rate:** approximate interest costs are assumed to reflect on anticipated differences in costs. For ECA 5% interest if assumed, for SD 8%.
- Tenor:** for both financing sources a tenor of 20 years is assumed, repaid on pari-passu basis. A grace period of 2 year after COD is considered to cover the ramp-up period after which repayments will start. However, interest is already charged to the NPP in the grace period.
- We refer to the Scoping document for a more detailed overview of the financing assumptions.

Attracting private capital lowers public financing, but increases total project costs and decreases cash flows to the Dutch State

Attracting private capital impacts the total sources and uses at COD due to, amongst others, the capitalisation of interest, the total project cost increase

- Table 9 presents the following elements for the three scenarios defined:
 - Financing at COD:** provides an overview of the total financing sources of the project. Note that capitalised interest is an important factor which increases the total project costs (the total financing of the project). Given interest cost of 0% pre-COD for government debt is assumed, no interest is accrued on this loan;
 - Cash flows to and from entity:** Cash flows to the Dutch State (overarching all government entities), consists of a cash outflow for the State, in the form of a CfD top-up payment to the project, and cash inflows for the State in the form of interest, repayments, taxes and dividends.
- In summary, the following conclusions can be drawn when assessing the financing at COD across the three scenarios:
 - In the cases where private capital is included (Scenario II and III), the absolute value of public financing (debt and equity) decreases as private capital provides additional funds of EUR 5 billion in Scenario II and EUR 10 billion in Scenario III.
 - The higher cost of private capital is visible in the total balance at COD, which due to the capitalised interest, ranges from EUR 39.1 billion in Scenario I (fully public) to EUR 42.6 billion in Scenario III (EUR 10 billion private capital).
 - Higher total balances at COD increase the debt that the Business Case must service. The Business Case (post COD), between the scenarios, are unchanged, which means the increase in debt service leads to the requirement for a CfD in Scenario II and III of respectively EUR 6.4 billion and EUR 14.9 billion over the project's lifetime.
 - The total (net) cash flow to the Dutch State (over the project's lifetime) decreases as private capital is introduced. This is mainly driven by the increase in CfD (outflow) and decrease in interest and repayments to the State (inflow). This is further explained on the next page.

Project Split - Financing at COD and cash flows after COD

EUR m	Scenario I	Scenario II	Scenario III
Financing at COD			
Equity	17,492	15,982	14,812
Debt	21,691	18,691	15,691
Public financing	39,183	34,673	30,503
ECA - Principal	-	5,000	5,000
ECA - Capitalised interest	-	1,284	1,284
SD - Principal	-	-	5,000
SD - Capitalised interest	-	-	814
Private financing	-	6,284	12,098
Total	39,183^(a)	40,957	42,602
Cash flows to and from entity			
CfD top-up	-	6,447	14,904
A Government	(14,131)	(12,177)	(10,222)
B ECA	-	(3,865)	(3,865)
SD	-	-	(5,721)
Interest	(14,131)	(16,042)	(19,808)
C Government	(21,691)	(18,691)	(15,691)
ECA	-	(6,284)	(6,284)
SD	-	-	(5,814)
Repayment	(21,691)	(24,975)	(27,789)
D Taxes	(32,467)	(33,287)	(34,268)
E Dividend	(108,750)	(109,183)	(110,079)
Ratios			
A:E Cash flow to the Dutch state	177,040	166,891	155,356
Average CfD (EUR/MWh)	-	17 (40 quarters)	25 (60 quarters)
LCOE (EUR/MWh)	81	88	98
RoE (%)	4.5%	5.0%	5.4%

Table 9

Note: (a) The difference between the EUR 39,1 billion at COD and the Capex estimate of EUR 30 billion is driven by three effects: (1) the figures in Table 9 are expressed in nominal terms, which leads to an increase in Capex due to inflation; (2) funding of working capital; (3) funding of the ramp-up period.

The introduction of private financing lowers the cash outflow pre-COD, but increases it post-COD (and overall) for the State

In a fully public scenario (scenario I), the net cash balance is positive

- Table 10 on the right shows the cash flows to the Dutch State over the first 40 years, split between the pre-COD phase and operations^(a). Capex and CfD top-ups are shown as negative cash flows (from the State to the NPP), while positive cash flows reflect returns to the State. Scenario I is presented in table 10, Scenario III in table 11.
- In Scenario I, no CfD top-up is required, as the NPP generates sufficient cash to meet all financial obligations. Dividends and taxes increase steadily as interest payments decline.
- During the operational period shown in table 10, the NPP generates EUR 49.2 billion in cash flow to the Dutch State. Given the pre-COD Capex of EUR 39.2 billion, financed by the State, the overall outcome is cash-positive for the State of approximately EUR 10 billion.

When ECAs and Senior Debt are introduced (Scenario III) the cash outflow for the State pre-COD decreases, but leads to a net negative cash balance

- The introduction of EUR 10 billion in private financing (ECA and SD) reduces the State's Capex contribution to EUR 30.5 billion. Despite the EUR 10 billion injection by ECAs and Senior Debt, State funding reduces by only EUR 8.7 billion due to higher equity needs during ramp-up to cover increased debt servicing.
- During operations, the inclusion of private financing (in Scenario III) leads to:
 - Higher cost of capital, as private financiers require a higher return than the Dutch State. Total interest payments increase from EUR 14.1 billion to EUR 19.8 billion (as shown on the previous page);
 - Higher debt service triggers a CfD top-up and private financing raises the DSCR from 1.0x to 1.2x. The CfD top-up is a cash outflow for the Dutch State, while also generating higher tax revenues and dividend payouts.
- Scenario III generates EUR 28.0 billion in cash flow to the Dutch State, during the operational period. Given the pre-COD Capex of EUR 30.5 billion, the overall outcome is cash-negative for the State of approximately EUR 2.5 billion.
- Table 12 shows that Scenario III lowers early Capex financing by EUR 8.7 billion but decreases the cash flows to the State during operations with EUR 21.2 billion. Highlighting a timing trade-off of net EUR 12.5 billion.

Scenario I - Cash flow to the Dutch State

EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065	Total
Capex contribution	(39,183)						
CfD top-up		-	-	-	-	-	-
Dividend		449	1,830	3,382	4,724	6,243	16,628
Interest		3,799	3,111	2,424	1,737	1,048	12,119
Debt		3,615	3,615	3,615	3,615	3,615	18,076
Taxes		38	192	396	685	1,047	2,358
Total pre-COD	(39,183)						
Total post-COD		7,901	8,748	9,817	10,761	11,954	49,180
Total cash flow to the Dutch State							9,997

Table 10

Scenario III - Cash flow to the Dutch State

EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065	Total
Capex contribution	(30,503)						
CfD top-up		(8,907)	(4,919)	(1,078)	-	-	(14,904)
Dividend		1,335	2,831	1,706	2,797	6,924	15,593
Interest		3,943	2,251	1,753	1,256	758	9,962
Debt		2,615	2,615	2,615	2,615	2,615	13,076
Taxes		712	551	389	648	1,964	4,263
Total pre-COD	(30,503)						
Total post-COD		(303)	3,328	5,385	7,317	12,262	27,989
Total cash flow to the Dutch State							(2,514)

Table 11

Total cash flow to the Dutch State

EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065	Total
Scenario I	(39,183)	7,901	8,748	9,817	10,761	11,954	9,997
Scenario III	(30,503)	(303)	3,328	5,385	7,317	12,262	(2,514)
Delta cash flow per period to the Dutch State	8,680	(8,203)	(5,420)	(4,432)	(3,444)	307	(12,511)

Table 12

Note: (a) The operational phase extends until the year 2099, but we have limited this analysis (for clarity purposes) to the mentioned period.

Main considerations resulting from the financial assessment indicate complex relationships between parameters

Below, a summary is provided, describing the various considerations resulting from the financial analyses on the three defined scenarios

- Mainly considerations on the assessment of attracting private capital and Scenario I, II and III. However, specific insights on the Business Case were elaborated on:
 - Data population of the Financial Model is currently based on desk research and inherently uncertain. Additional information, for example site location, technology chosen, construction partners and supply chains and operational details provided by the Delivery workstream, is required to refine and strengthen the Business Case and corresponding financial assessment, and can have an impact on the financial structure and GSP;
 - The current Business Case is cash flow positive and returns a Project IRR of 3.9% but is heavily dependant on factors such as i) Capex estimates and construction timelines ii) inflation assumptions and iii) operational assumptions.
- Based on the project's assumed fundamentals, Scenario I (i.e. full public financing) is defined by assessing various debt and equity capital structures. The following important considerations are determined:
 - Zero interest cost assumed pre-COD has a substantial impact on the maximum debt allocation, given that capitalised interest, and thus total debt at COD, is minimised;
 - Risk-free rate is an important factor representing cost of borrowing money. As shown on page 76, the risk-free rate may differ substantial over time, impacting the potential debt to equity ratio for the Dutch State;
 - Increasing the total debt financing part may require revenue support to the NPP to cover debt service. In case only public financing is considered, this results in cash circulation between the Dutch State (and the various government bodies) and the NPP SOE;
 - Maximising the capital structure to a point where a CfD is not required (at a DSCR of 1), may limit the State in case of a cost overrun. Any additional debt would trigger the inclusion of a CfD with a strike price above the assumed energy price of EUR 75 MWh. A buffer (by not maximising public debt financing) could be considered to avoid this.

- By assessing Scenario II and III which reflect partial private financing, and comparing the results to Scenario I, the following considerations are determined:
 - The amount of initial public financing required is lowered as private financing is attracted, but higher overall support via revenue top-ups (CfD);
 - Public financing required for construction is lowered as private financing is attracted. However, the impact is partially mitigated by capitalised interest as no cash generation is realised before COD and then more than offset by the revenue support in the form of top up CfD payments to that private capital;
 - The LCOE includes interest and will increase directly when private capital, with (higher) interest, is attracted.
 - Shorter tenors lower total interest paid, but increase yearly repayments, increasing the potential need for revenue support to cover debt service.

Conclusion

- The Scenario Analysis highlights the sensitivity of the Business Case to the assumptions. As a result, deviations from the assumed assumptions may lead to substantial different outcomes, such as required financing, and required GSP. However, this does not affect the preferred GSP chosen from the offset.
- The main consideration to the Dutch State is the preferred timing and balance between financing (pre-COD) and support (post-COD) provided. In case:
 - the Dutch State does not attract, or limits, private capital this would require higher investments in the short term, but lower revenue support after COD.
 - the Dutch State attracts private capital to lower the financing need from public sources. However, after COD revenue support by the Dutch State is most likely higher, with a CfD strike price above the assumed market electricity prices.
 - Additional requirements that are likely for private finance include bigger equity funding contingency funding and completion guarantees that are not costed in the analysis but would increase the burden to the State
- Given these considerations the DMF provides an important basis to weigh the financial outcomes, versus scenarios chosen. The emphasis on affordability in the DMF underlines a substantial GSP throughout the financing structure. In the section hereafter 'the financial analyses conducted are included in the overall view on a preferred GSP.

Chapter

Management Summary

Introduction

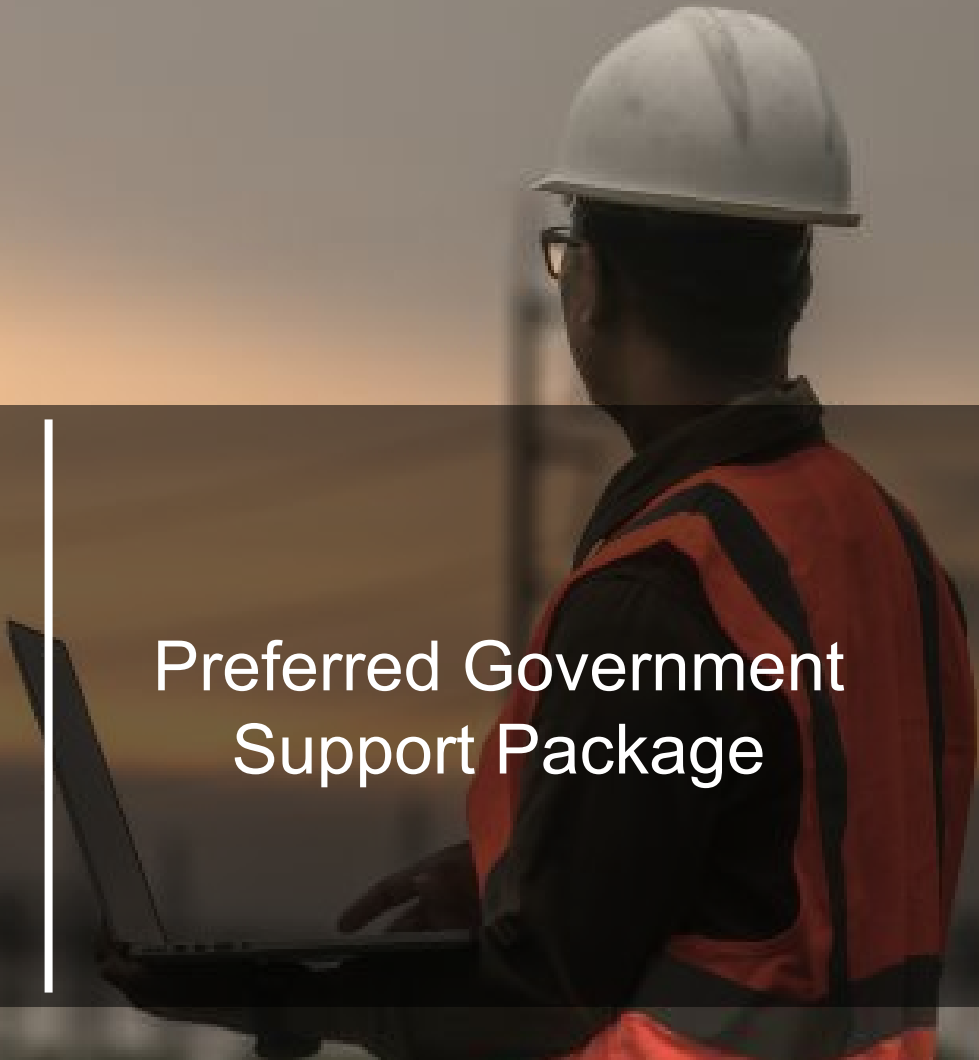
Precedent NPP models used in Europe

Integrated Decision-Making Framework

Option Analysis

Scenario Analysis

Preferred Government Support Package

A person wearing a white hard hat and a high-visibility orange safety vest is shown in profile, holding a laptop. The background is a blurred industrial or construction site at dusk or dawn.

Preferred Government Support Package

Introduction to the Government Support Package for the development of Nuclear Power Plants

Introduction to the Government Support Package

- This management summary provides a brief overview of the procedures performed, findings and recommendations with regards to the determination of a preferred Government Support Package (“GSP”). The management summary follows the structure as described below.
- **Context of this Report:** KGG, supported by KPMG and Etara, developed a GSP to enable the Dutch nuclear new-build programme. This follows extensive feasibility studies, market consultations, and the decision of KGG to establish NEO NL, the State-Owned Enterprise (“SOE”) tasked with the project delivery.
- **Decision-Making Framework:** To assess various project models, this Report provides a structured Decision-Making Framework (“DMF”) which enables the assessment of financing- and revenue models across five criteria: Affordability, Feasibility, Impact on State balance, State control, and Risk-sharing. These criteria are supported by two additional prerequisites: EC Approval and market trust.
- **Option analysis:** This Report includes insights from the different financing models, such as private- and publicly financed variants, to the different revenue models, such as RAB, CfD and PPAs by assessing these options along the axis of the DMF criteria.
- **Lessons from EU precedents:** The Report includes insights from EU State aid assessments of similar nuclear projects. These projects underline the importance of proportionality of the aid and minimising market distortion to the EC.
- **Scenario Analysis:** Three scenarios were analysed: (I) fully public; (II) Public + ECA; and (III) Public + ECA + Private (Senior Debt). Additionally, sensitivity analysis underline how sensitive the financial outcomes (such as LCOE and need for revenue support) are to changes in the Business Case assumptions.
- **GSP measures considered:** Three key measures were evaluated: (I) State financing; (II) Revenue support via a CfD; and (III) State guarantees.
- **Recommendation:** Based on the overall assessment, we recommend initiating the project with fully public financing including a CfD, ensuring affordability and continuity. The financing structure should be structured in such a way that the project structure remains flexible for future private capital inclusion.

Context of
this Report



Option
Analysis



..... Decision-Making
Framework



..... Lessons from
EU precedents



Scenario
Analysis



..... GSP Measures
and Recommendation

The unique risks related to Nuclear power development require a well-defined Government Support Package

Considerations for a GSP in Nuclear Power development

- State involvement is essential during the development and construction phases of nuclear power plants. Recent nuclear power initiatives across Europe, such as PAKS II (Hungary), Dukovany 5 (Czech Republic), Lubiato-Kopalino (Poland), and Hinkley Point C and Sizewell C (United Kingdom), highlight the critical role of early-stage State support in ensuring project viability and progress.
- A range of unique risk factors, in the early-stage of such projects, deter private investments. These risks include:
 - **Political and regulatory risks**, such as changes in political landscape, laws and regulation pose a considerable risk that may affect the feasibility or profitability of the project. These risks are magnified by the project's long timelines.
 - **Long-term revenue uncertainty**, as nuclear energy projects are inherently uncertain due to their extended operational timelines. This uncertainty is compounded by the volatility of energy market prices over time. Together, these factors can reduce investor confidence and complicate robust forecasting.
 - **Technology risks**, while the technology has been proven in other locations, the project carries implementation risks because no similar project has been built in the Netherlands for some time. This "*First in a while*" status increases the risk of capital expenditure uncertainties and potential cost overruns compared to fully established technologies.
 - **Capital intensity, financial concentration risks and complexity**, as the project requires substantial upfront capital with a high construction risk given its complexity. This further enhances the risks for private parties and leads to concentration risks on the financiers' balance sheets. Mitigation of this risk requires a consortium of multiple private parties, which increases the complexity of the financial structure of the project.
- Due to the project's risk profile, private financing during the initial phase is both scarce and expensive. The GSP is designed to address these challenges through a coordinated set of measures.

KGG, supported by KPMG and Etara, set out to define a preferred funding structure and GSP

- KGG is currently advancing the preparatory phase of the Dutch nuclear new-build programme. In recent years, key milestones have been reached, including the completion of technical feasibility studies, comprehensive market consultations, and the planning for the (future) establishment of Nucleaire Energie Organisatie Nederland (NEO NL), a SOE, which will be tasked with overseeing the technology selection, construction, operation, and the decommissioning of the plants.
- In recent months, KGG, supported by KPMG, Etara, and other stakeholders, has focused on developing a comprehensive GSP to define the State's role in advancing the nuclear new-build program. These efforts have shaped the initial contours of the GSP, which will be further refined in the coming months through stakeholder dialogue, including with the European Commission for State aid approval, and aligned with the governance and delivery model.
- As outlined in the chapter "Nuclear Power Plant Project Models" and the precedent cases reviewed, there are numerous possible combinations of financing, revenue, and delivery models. Each configuration of options presents its own advantages, disadvantages, and specific requirements regarding the necessary GSP.
- Additionally, some project models are inherently connected to a GSP measure. For example, the financing of the NPP via State debt at low interest rates, may be both a financing model (if owner is State) as well as a GSP measure.
- KGG-supported by KPMG, Etara, and other relevant stakeholders initiated the development of a preferred project model for the financing structure of the NPP, along with a preferred GSP package to support it.
- This initiative was facilitated through a series of workshops, where the involved parties engaged in in-depth discussions on the available options, their trade-offs, and State aid compatibility. To guide the evaluation of trade-offs between different project models, a DMF was established, focusing on key parameters (see subsection: "*Integrated Decision-Making framework*").
- Additionally, a Financial Model was developed to provide quantitative insights into the business case ("Business Case") across various scenarios, including the corresponding GSP requirements.

The various different financing- and revenue models have been assessed based on the Decision-Making Framework

The following criteria of the Decision-Making Framework guide the assessment of the different project models

Integrated Decision-Making Framework	
Criteria	Description
Impact on debt and balance	The impact on debt and balance of the State during the construction and operational phases. This includes the efficiency that both the financing- and revenue model have on supporting the necessary investment- and operations phase, respectively.
Affordability	Affordability relates to the absolute costs of the project. This is measured based on the Levelized Cost of Energy ("LCOE").
Feasibility	The feasibility and timeliness of the financing, with emphasis on the various factors determining whether the financing can be realised within a reasonable timeframe. Feasibility also covers the scalability of the project model and GSP to support additional NPPs that are foreseen after the first two reactors.
State control	The level of flexibility in which the State can control decision making in the delivery entity and act on changes in political preferences. This involves identifying the relevant stakeholders, such as ministries, private investors, and operational companies, and concerns the distribution of ownership rights and the authority to make decisions.
Risk sharing between State, investors and vendors	The financial risks can be allocated among the State, (private) investors, and the vendor. This mainly concerns the construction- and revenue risks, and the potential deviations from the expected budget series for the State, and how these can be minimised to the greatest extent possible.
Prerequisite^(a)	EC approval and Market Trust

Note: (a) Additionally, the DMF consists of two prerequisites: (1) EC Approval; and (2) Market Trust. Prerequisites refers to conditions or requirements that must be fulfilled. These are non-negotiable and do not lead to choices between the various project- and GSP options

The various project models (revenue- and financing model options) were assessed along the axis of the DMF

- The DMF consists of five criteria and two prerequisites.
 - The criteria are defined as the principles by which the various NPP project- and GSP options can be evaluated. They are used to measure, compare, and determine the suitability of the options to the State's preference.
 - The prerequisites, on the other hand, are conditions or requirements that must be fulfilled. These are non-negotiable and do not lead to choices between the various project- and GSP options, other than determining whether a package is acceptable or not.

The assessment of financing models has led to the exclusion of certain options, while requiring further analysis of others along the axis of the DMF

- KPMG assessed the following financing models: State-, ECA-, Private- Vendor-, and Owner-led financing (see subsection: '*Financing Models*').
- Owner-led financing (by a large energy producing company) is unlikely within the Dutch context, whilst Vendor financing has become less feasible as vendor capital is limited.
- Further assessment between State-, ECA- and Private financing requires an assessment along the axis of the DMF, as further explained on the next page.

The revenue models were evaluated using the DMF framework, resulting in the selection of a preferred model based on the assessed criteria

- KPMG assessed the following revenue models: Regulated Asset Base ("RAB", Power Purchase Agreements ("PPA") and Contract for Differences ("CfD") (see subsection: '*Revenue Models*').
- Models such as the Mankala have been considered not applicable in the Dutch context and unviable due to lack of an offtakers market. As a result, this model has not been assessed.
- The remaining models, such as RAB, CfD and PPA have been further assessed along the axis of the DMF on the next pages.

Affordability is the key parameter differentiating between public and private financing

Decision-Making Framework

- For the financing model of the project, both private- and public financing were evaluated (see subsection: financing models) along the axis of the DMF. The table on the right refers to both private- and ECA financing as private financing due to their similarity, highlighting where ECA-financing may differ explicitly.
- Among the DMF criteria, affordability has proven the most decisive.
 - Impact on Debt and balance:** The budgetary impact of private financing depends on the structuring of guarantees and instruments. As we expect limited risk transfer to private capital providers (due to the State guarantees), we expect that the respective State guarantees may qualify as EMU debt-relevant^(a). The exact impact that attracting private capital has on the State's budget requires further assessment and does not yet serve as a clear differentiator.
 - Affordability (LCOE):** This is the **most differentiating parameter**. Differences in cost of capital between public and private capital, due to lower interest rates and return requirements for State debt and equity respectively, consistently results in a lower LCOE. In addition, KGG noted that affordability is an important criterion in the assessment.
 - Feasibility:** This criterion helped eliminate impractical options, such as full private financing from the outset. Other scenarios (introduced in the following pages) have been developed ranging from full State variants to variants where State-, ECA- and private financing are combined. These combinations are considered feasible, provided a market accepted GSP is in place.
 - State Control:** In all viable scenarios, the State retains full or majority ownership of the project entity prior to COD, ensuring strategic control. Therefore, this parameter does not distinguish between financing options.
 - Risk sharing:** While risk allocation is a key consideration, in practice, private capital, especially in early phases, requires extensive State guarantees. As a result, the level of risk transferred to private financial parties (via the financing model) is most likely minimal, making this parameter non-differentiating across scenarios. Risk-sharing may be achieved via the delivery model.

Note: (a) The EMU impact of equity injections, loans, and guarantees depends on how they're structured, specifically, whether they qualify as financial transactions and the likelihood of repayment or guarantee activation.

Assessment of private- and public financing via DMF		
Criteria	Private financing	Public financing
Impact on debt and balance	Private capital may reduce EMU balance impact if sufficient risk is transferred, but required State guarantees likely mean that the impact may be limited. Requires further assessment.	Public financing may impact EMU balance and debt depending on whether equity or debt instruments are used. Debt financing may have lower EMU balance impact than equity injections. Requires further assessment
Affordability	Higher cost due to higher interest rates and required returns. Long construction phase amplifies cost through capitalised interest. ECA financing is cheaper than private, but more costly than public.	Lower financing costs due to government's creditworthiness.
Feasibility	Private financing (at sufficient volume) from the start is unrealistic due to high risk, potentially achieved by extensive State guarantees. At a later stage private funding may be available. ECA-financing is available at an earlier stage (early construction) than private.	Public financing is fully feasible across all assessed scenarios.
State Control	State remains majority/full owner in all realistic scenarios, even with private capital involvement.	State remains majority/full owner in all realistic scenarios, even with private capital involvement.
Risk sharing	Private capital requires extensive State guarantees, especially during development and construction.	State bears most risks during early phases. Risk sharing possible via delivery model.

Feasibility is the key parameter differentiating between the revenue models

Decision-Making Framework

- For the revenue model of the project, RAB, CfD and PPAs were evaluated (see subsection: Revenue Models) along the axis of the DMF.
- Among the DMF criteria, feasibility has proven the most decisive.
 - Impact on Debt and balance:** The RAB model offers revenue during the construction phase, reducing reliance on State financing and the amount of capitalised interest prior to operations. The CfD and PPA do not generate revenue during construction, increasing budgetary exposure.
 - Affordability (LCOE):** The RAB model positively impacts LCOE by limiting capitalised interest. CfD and PPA reduce financing costs indirectly through revenue certainty in the operational phase.
 - Feasibility:** This is the **most decisive and differentiating parameter**.
 - The RAB model is deemed unfeasible in the short timeframe envisaged by the State due to the regulatory setup required in the context of nuclear.
 - The implementation challenges for a CfD are fewer as similar frameworks have been implemented in similar cases throughout Europe. A CfD construct can be permissive and scaled for any volumes of power contracted under long term PPAs (if closed in the future). Accordingly, the CfD is deemed the preferred option.
 - Nuclear base load is well suited for long term PPA arrangements. Given the 10 year + development and construction period however, demand for PPA is typically at a moment close to COD, given more certainty in market prices.
 - State Control:** not applicable across all models, as no substantial differentiation has been identified between the three revenue models.
 - Risk sharing:** RAB shares risk with consumers but may reduce cost control incentives (moral hazard, see subsection: 'Option Analysis').
- The assessment of the revenue models along the DMF has led to the preference for a CfD model, which is well aligned with Dutch- and EU policies. Furthermore, it effectively stabilises operational revenues and reduces investment risk.

Note (1) In this example the costs for consumers are not classified as tax. KPMG did not further assess this assumption.

Assessment of the revenue models via DMF			
Criteria	RAB	CfD	PPA
Impact on debt and balance	Limited (if not treated as tax) as it primarily relies on funding via consumers ¹ . The revenues during construction reduce the need for State-backed financing	Likely to have an impact on the State's budget but depends on market- and strike price. No revenue available during construction.	Depends on the structure (commercial vs. a government PPA). No revenue available during construction.
Affordability	Limits capitalised interest (and thus capital costs). Positive impact on LCOE	Does not directly affect LCOE. Indirect impact by reducing revenue risk for capital providers.	Does not directly affect LCOE. Indirect impact by reducing market risk for capital providers.
Feasibility	No nuclear precedent in NL or EU. Requires complex and time-consuming regulatory setup.	Preferred method by the EC and fewer legal/regulatory changes needed. It can be implemented without full framework before construction	Requires large, creditworthy offtakers. Less regulatory burden than RAB, but more complex than CfD due to the number of PPAs.
State Control	Not Applicable	Not Applicable	Not Applicable
Risk sharing	Risk sharing occurs with consumers which partially bear cost overruns	Risk during construction lies with investors. CfD support during operations.	Depends on contract structure

State aid considerations: Lessons from other European nuclear projects

The GSP measures are subject to the European Commission's (EC) State aid assessment, for which past nuclear power plant cases provide lessons learned

- The GSP measures must adhere to the EC's State Aid rules under Article 107(3)(c) TFEU. Accordingly, the GSP requires structuring in line with these articles. Previous cases, like Dukovany, Sizewell C, Hinkley Point C, Paks II, and Lubiatowo-Kopalino, provide lessons learned across the four key criteria: objective of common interest, necessity and market failure, proportionality, and minimising market distortion.
- The first two criteria of Article 107(3)(c) are typically well established and accepted by the Commission. However, the case studies show that the EC places particular emphasis on the evidence supporting the **proportionality of the aid** and the steps taken to **minimise market and competition distortions**.

1. Objective of common interest

Nuclear projects are recognised as contributing to EU goals like energy security, decarbonisation, and diversification, aligning with strategies such as REPowerEU.

2. Necessity and market failure

The EC acknowledges that nuclear projects face unique financing barriers, high capital needs, long timelines, and regulatory risks, justifying State support through mechanisms like CfDs, debt and equity injections, and guarantees. Precedents usefully show the ability of different and tailored approaches to mitigate the same market failures.

3. Proportionality of the aid

The Commission ensures that aid is limited to the extent necessary to close the funding gap and avoids overcompensation of beneficiaries but does take into account in its balancing assessment positive externalities. The EC uses financial modelling analysis to assess scenarios and may require support modifications as part of its approval conditions:

- Hinkley Point C: Extended profit-sharing and increased guarantee fees.
- Dukovany: Shortened CfD duration and clawback provisions.
- Paks II: Full State financing with profit-return conditions.
- Lubiatowo-Kopalino (no decision yet): EC raised concerns over (potential) excessive aid and broad guarantees.

The GSP measures are subject to the European Commission's (EC) State aid assessment, for which past nuclear power plant cases provide lessons learned (continued)

4. Minimising market distortion

The EC requires legal and operational separation from incumbents, transparent trading strategies, and non-discriminatory auctions to prevent market manipulation and protect competition:

Lessons from EU State aid assessments for Nuclear Power projects (continued)

- Hinkley Point C: Trading transparency and separate accounting.
- Dukovany: Independent governance and mandated market sales.
- Paks II: Structural separation and regulated trading volumes.
- Building on these insights, a number of key lessons emerge from the EC's scrutiny of recent State aid cases, particularly around proportionality and market distortion.
 - First, the EC places strong emphasis on avoiding overcompensation, especially where private equity or private financing is involved. Mechanisms such as clawbacks, capped returns, and equity gain-sharing are essential to ensure that public support does not result in non-market standard, returns.
 - Second, the trading strategy of the nuclear power plant must be designed to support market transparency and liquidity, while avoiding the displacement of renewable energy generation. This is typically achieved through commitments to sell a significant share of output on organised markets and through non-discriminatory auctions.
 - Moreover, there is an increasing focus of the EC on the implications of private PPAs on CfD support mechanisms.
 - Finally, the EC is attentive to the market structure implications of aid. Legal and operational separation from incumbent utilities, independent governance, and restrictions on reinvestment or expansion without further approval are all critical to mitigating risks of market concentration and manipulation. These lessons underscore the importance of designing aid schemes that are not only financially justified but also structurally aligned with broader market integrity and decarbonisation objectives.

Three identified scenarios are assessed through financial analysis

Scenario analysis

- To assess the Business Case and potential financing scenarios, KPMG has assessed three main scenarios (please refer to the 'Scenario analysis'):
- **Scenario I (Full public Scenario)**, considers full public financing until commissioning. A financing structure is pursued which 1) maximises debt 2) keeps the Strike Price of the CfD as low as possible 3) secures the continuity of the SOE. Given these criteria an optimal financing structure of 60/40 D/E is proposed. Government debt includes 0% interest pre-COD and 3.75% post-COD;
- **Scenario II (ECA Scenario)**, attracts private capital from ECAs in the form of multiple loans for a total of EUR 5 billion committed at FID at 5% cost;
- **Scenario III (ECA + Senior debt Scenario)**, attracts capital from both ECA as well as private financiers (defined as senior debt). Apart from the assumptions in Scenario II for ECA, senior debt is assumed to commit EUR 5 billion of capital five years prior to COD at 8% cost, with any State guarantees potentially required to mobilise that capital are assumed to be zero additional cost.
- All three scenarios have the following assumptions in common:
 - Capex in real terms of EUR 30 billion considering a 1650 MW NPP (Based on the upper band of KGG's letter to Parliament)¹.
 - Straight line market price of EUR 75 MWh (in 2025 terms).
 - Availability of 90% and load factor of 100% (resulting in 90% realised output).
 - Indexation of revenue (market price) and Opex of 2%.
 - A CfD is required for each Scenario (could be valued at zero). The CfD is based on total cash needs over each 5-year calibration period, setting a strike price based on the free cash flows required for debt servicing.
 - No target equity return is assumed.

Important limitations to the scenario analyses

- The current Business Case is based on public information assessed by KPMG. There has been no assessment in collaboration with the delivery model / workstream of KGG. KPMG has drafted a Scoping document ('20250904 - Project Split - Scoping document') in which the various parameters, assumptions and sources have been described.
- The fundamentals of the Business Case, such as capital expenditures, technical (site location, technology), operational (availability, load following) and market (electricity prices, inflation), are highly uncertain.
- Given the inherent uncertainties in the Business Case and assumptions on financing (such as commitment value, tenor and interest rates), potential equity stakes by private parties or other refinancing options have not been assessed.
- Changes in assumptions (for example, increases in Capex due to new information) impacts perceived risk, estimated cash flows and therefore capital structure and potential support mechanisms. The current estimates should be considered indicative, focusing on the impact of various assumptions, and are suited for the assessment as described. Results may differ substantially from the projections and assumptions.

Source: (1) Letter to Parliament with reference KGG 97879255 dated 16th May 2025: Voortgangsbrieff nieuwbouw kernenergie mei 2025 - This in no way reflects any preferences between the two vendors and is solely for the purpose of this document and the financial analysis which are done to allow assessment of the GSP.

Further financial analysis underlines the sensitivity of LCOE and CfD support to changes in Business Case assumptions

Insights from the financial assessment

- The top right table reflects on the sensitivities of LCOE and CfD support within Scenario I (fully public) with regards to changes in capital structure and Capex. Additionally, the table reflects the differences between capitalised interest, LCOE and CfD support for the three different scenarios (I, II and III).
- Cash circulation:** Changes in capital structure (more debt) lead to an increase in the debt service requirement, and consequently the CfD support required (height of CfD Strike price), as shown in point **1** on the right. An increase in the capital structure (such as towards 98/2) requires revenue support (in the form of a CfD top-up payment). This cash circulation (CfD payments from State to the SOE) in return for higher debt repayments (from SOE to State) may be undesirable from effective usage of public funds.
- General sensitivity:** The Business Case is sensitive to changes in key inputs, such as Capex estimates, and/or extensions in expected construction periods. This is presented in point **2** on the table on the right, which illustrates that in a fully public scenario (Scenario I) a 5-year delay of COD, including a EUR 10 billion Capex overrun, increases the LCOE from EUR 81 MWh to EUR 103 MWh.
- Accrued interest:** Interest during construction is required to be accrued due to no (or a lack of) incoming cash flows, increasing total debt balance and future interest payments. In Scenario III (with ECA and SD), presented in point **3** on the right, this results in a EUR 2.1 billion increase in total debt at COD (compared to Scenario I).
- Timing of the support provided:** Less State support in the pre-operational phase of the project, leads to a higher required support during operations as presented when comparing Scenario I (fully public) to Scenario III (Public + ECA + SD) in point **4** in the table on the right. This trade-off is illustrated in the table as a lower amount of state financing (pre-COD) in Scenario III (EUR 8.7 billion lower pre-COD) will lower the (net) cash-inflow post-COD with EUR 21.2 billion.
- In summary, higher interest rates pre-COD (lower State support) leads to higher CfD payments post-COD (higher State support) with the latter post-COD support having to also bear the cost of compounding interest.

Sensitivity analyses				
EUR m and 0% interest pre-COD	Capitalised interest	LCOE (EUR/MWh)	Average CfD (EUR/MWh)	RoE
Scenario I (60/40 Debt/Equity)	-	81	0 (0 quarters)	4.5%
70/30 Debt/Equity	-	83	6 (20 quarters)	4.9%
98/2 Debt/Equity	-	94	17 (60 quarters)	8.6%
Scenario I (EUR 30b real Capex, 2% inflation)	-	81	0 (0 quarters)	4.5%
EUR 10b Capex cost overrun	-	98	8 (40 quarters)	3.5%
+ 5 year delay	-	103	9 (20 quarters)	3.5%
Scenario I (Public financing only)	-	81	0 (0 quarters)	4.5%
Scenario II (Public financing + EUR 5,000m ECA (5%))	1,284	88	17 (40 quarters)	5.0%
Scenario I + EUR 5,000m SD (8%)	814	90	20 (40 quarters)	4.9%
Scenario III (Public + ECA + SD)	2,098	98	25 (60 quarters)	5.4%

Cash flow to the Dutch State						
EUR m	Pre-COD	2039 - 2045	2046 - 2050	2051 - 2055	2056 - 2060	2061 - 2065
Scenario I - Public financing only						
Cash out flow	(39,183)					
Cash in flow		7,901	8,748	9,817	10,761	11,954
Total per period	(39,183)	7,901	8,748	9,817	10,761	11,954
Total cash flow to the Dutch State						
						9,997
Scenario III - Public + ECA + SD						
Cash out flow	(30,503)	(8,907)	(4,919)	(1,078)	-	-
Cash in flow		8,605	8,247	6,463	7,317	12,262
Total per period	(30,503)	(303)	3,328	5,385	7,317	12,262
Total cash flow to the Dutch State						
						(2,514)
Delta cash flow pre-COD	8,680					
Delta cash flow post-COD		(8,203)	(5,420)	(4,432)	(3,444)	307
Sum delta pre-COD	8,680					
Sum delta post-COD	(21,191)					
Net timing effect	(12,511)					

In both a public and private financing scenario, the project will require a combination of measures 1, 2 and 3 (1/2)

Measure 1: State financing ensures policy goals of low cost

- Public financing, via equity and/or debt, ensures lower costs (compared to private financing).
- The scenario analyses highlight the sensitivity of LCOE and Project IRR to the cost of capital. In Scenario III, the addition of ECA and senior debt financing increases the LCOE from EUR 81 MWh to EUR 98 MWh. Public funding offers a cost-effective solution.
- Sensitivity analysis of the construction costs shows that the LCOE can increase substantially in case of construction delays combined with higher Capex. For example, a scenario involving a 5-year construction delay, EUR 10 billion in additional costs, and 2% higher Capex inflation results in an EUR 134 MWh LCOE¹.
- On the other hand, it has been argued that the inclusion of private financiers may add to the scrutiny on the project by conducting due diligence and stringent project governance and therefore limiting cost overruns. The subsection: '*Scenario Analysis*' illustrates that this added value must contribute significantly to offset the higher capital costs from private financiers, which amounts to EUR 7.8 billion (comparing Scenario I (fully public) to Scenario III (ECA + senior debt)).
- The State has expressed its preference for (partial) public financing of the project via debt instruments to formalise (timely and periodic) repayment of capital provided. KPMG notes that debt instruments have the advantage over equity injections. As equity gives the right to dividends, which from a legal point of view has a different security.
- Due to the long construction period and accrual of interest, attracting private debt impacts the LCOE (increases), whereas the height of the LCOE is a key consideration of the State.
- The LCOE is also in a scenario with full public financing dependant on the on the pre-COD interest rate. As the interest rate is:
 - I. Paid upfront, requiring equity injection due to the absence of revenue and therefore cash generation in the pre-COD phase; or
 - II. Accrued, increasing the total debt commitment.

Note (1) Please refer to page 79 for the sensitivity analyse.

Measure 1: State financing ensures policy goals of low cost (continued)

- In both cases additional equity from the State is required to solely support the debt structure. Which leads to a higher LCOE, despite the Dutch State being both lender and borrower.
- As a result, a 0% interest debt instrument can be considered.
- The capital structure relies on the SOE's ability to service its debt obligations. A higher proportion of debt in the capital structure leads to an increase in debt service.
- In case the capital structure is optimised on the basis of the maximum debt service capacity (DSCR = 1), cost overruns may pose a significant challenge for the State. Financing cost overruns with additional debt leads to a (higher) required debt service that the SOE will not be able to bear based on its Business Case.
- The overruns may be covered by:
 - I. Additional equity and/or debt in combination with;
 - II. An increase in the revenue support in the form of an increase of the CfD's strike price.
- Summarised, structuring the project on the basis of the maximum debt service capacity may constrain its ability to absorb cost overruns, unless additional revenue is secured via the CfD or the shortfall is covered through extra equity contributions.

Measure 2: a revenue support mechanism, in the form of a CfD, to provide long-term revenue certainty

- In line with the EC's Electricity Market Design (EMD) reforms, the State prefers to provide revenue support via a (two-sided) CfD mechanism. The exact details on the structuring of the CfD depends on further refining the Business Case assumptions and financial structure that drive the debt service capacity. The principles guiding the CfD structure include: i) duration of the CfD; ii) Strike Price formula; iii) Reference Price; iv) Floor and Cap options; v) Incentive mechanisms for cost control, load following and operational efficiency; vi) Profit-Sharing mechanisms.

In both a public and private financing scenario, the project will require a combination of measures 1, 2 and 3 (2/2)

Measure 2: a revenue support mechanism, in the form of a CfD, to provide long-term revenue certainty (continued)

- The CfD model guarantees a fixed price for electricity during the operational phase of a NPP, shielding it from market developments. The resulting revenue stability significantly reduces investment risk, making it more feasible to secure financing in the operational stage and lowering the cost of capital, or in the construction phase if coupled with other construction phase risk mitigation contracts.
- Given its policy on state owned enterprises (SOE), the government requires a target return on equity from a SOE (article 5.7.3, '*Nota Deelnemingenbeleid Rijksoverheid 2022*'). Next to going-concern considerations, the (required) return of the SOE may indicate the need for a (revenue) mechanism to support cash flows, even when fully public financed.
- Given the i) the current assumptions in the Business Case ii) the proposed capital structure of 60/40 Debt-to-equity and financing assumptions, the current assumed market price of electricity is sufficient to cover its debt service (i.e. the currently resulting strike price is lower or equal to the assumed market price).
- The CfD should be periodically calibrated to ensure its alignment with developments in the Business Case of the NPP. The frequency will be further assessed.
- The proposed revenue support plays an important role in the expected allocation of risk and return that private capital (debt/equity) providers perceive. The CfD only mitigates the significant market price risks during operations, while other significant risks, such as the risk of non-completion of the project, are concentrated in the development and construction phases.

Measure 3: State guarantee / Change of law protection

- For the decommissioning of the plant, the ANVS requires, by law¹, operators of nuclear installations to provide a fully funded plan for decommissioning and dismantling the facility from the moment the installation becomes operational.
- Funding this provision is costly as the financial resources are retained with limited returns.

Measure 3: State guarantee / Change of law protection

- The goal of the regulation is to ensure that private parties reserve sufficient capital to dismantle the NPP. Given that the State has full ownership of the NPP the regulation results in the retaining of significant public funds which cannot be effectively deployed. To follow the regulation and ensure effective usage of public funding, a State guarantee with regards to the decommissioning fund can be considered.
- The State aims to provide a guarantee (against a premium). However, this approach remains uncertain, as discussions with the relevant ministries are still ongoing and have not yet been finalised.
- Given the intention to attract private capital in a later stage (specifically pre-COD), it may be necessary to provide State guarantees, which includes, amongst others, completion guarantees, change-of-law protection and political risks. These instruments are designed to reduce the perceived risk for private capital (especially) prior to the operational phase.
- Specific guarantees have not been further assessed at this moment, as these are tailor-made measures that are often the result of negotiations with private capital providers.
- If private capital may be attracted, support by public funds could potentially be lowered (Measure 1), albeit against an increase in guarantees provided (Measure 3) that private capital may require.
- Whether a measure, such as: (i) equity injection; (ii) a loan; and (iii) a guarantee impacts the State's debt and balance depend on their Economic Monetary Union (EMU) treatment^(a). The positive impact that attracting private capital may have on the EMU deficit and the State's budget depends on the structuring of such guarantee and how this is accounted for in the State budget.

Note: (a) The EMU balance (government deficit) and EMU debt (government debt) are key indicators used by the EU to monitor the fiscal health of its member states. The Stability and Growth Pact sets limits of 3% of GDP for the annual government deficit and 60% of GDP for total government debt.

Source: (1) Article 15f of the Dutch Nuclear Energy Act: Staatscourant 2011, 4386 article 15f.

We recommend a structure that provides flexibility to attract private financing and aligns with KGG's aim of affordability (1/2)

Initial phase – Fully public financing

- KPMG concludes that fully public financing at the start of the project is the preferred financial structure when taking into account the financing models, project risks, EU State aid precedents and the DMF.
- This conclusion is supported by the DMF, which identified affordability (in terms of LCOE) as the most differentiating criterion. Public financing delivers the lowest LCOE due to the favourable cost of capital of the Dutch State, making it the most cost-effective choice for the initial phase.
- In a fully public scenario, the following three key measures are expected to be implemented:
 - **Measure 1 – State Financing:** The State provides full financing through a capital structure while, based on the current Business Case, avoiding additional revenue support as much as possible (in the form of a CfD strike price above market price). This structure assumes the following:
 - 0% interest on public debt pre-COD and 3.75% interest on public debt post-COD; and
 - that maximises debt-to-equity ratio, which leads to a 60/40 debt-to-equity ratio.
 - The proposed capital structure will require further calibration, as the Business Case further develops, to ensure that the SOE is going-concern. Covering all obligations (such as repayments and interest) from market sales, with or without a CfD.
 - The acceptability of a 0% pre-COD interest rate, in the context of the approval of state aid by the EC, remains uncertain, with only one precedent. The assumed RoE may also be insufficient, and both require confirmation through engagement with the EC.

Initial phase – Fully public financing (continued)

- **Measure 2 – Revenue support via CfD:** KPMG advises the introduction of a two-sided CfD to mitigate market risk, specifically with regards to the development of energy prices, to support the entity's continuity.
- The CfD is based on total cash needs over each 5-year calibration period, setting a strike price based on the free cash flows required for debt servicing. The CfD is not introduced to cover operational and maintenance expenses.
- There is currently no target return for equity. This prevents cash flows (cash circulation) from the State to the private entity NEO, which can be deemed ineffective.
- Additional CfD design elements, such as floor and cap mechanisms, excess profit sharing, and incentives for operational efficiency, would be introduced to align with EDM guidance and maintain proportionality
- Given the proposal capital structure and the Business Case, the strike price of the CfD is currently equal to the expected market price of electricity.
- **Measure 3 – State guarantees:** KPMG advises the State to provide a guarantee to NEO on the decommissioning fund to ensure regulatory compliance, while avoiding setting up significant provisions from COD onwards with public funds.

We recommend a structure that provides flexibility to attract private financing and aligns with KGG's aim of affordability (2/2)

Initial phase – Fully public financing (continued)

- Taking into account the current Business Case and financing market, in combination with the considerations from the DMF, KPMG concludes that full public financing is optimal at this stage.
- To accommodate future market developments and evolving project conditions, it is essential to retain flexibility in the capital structure. The capital structure and its terms and conditions should therefore be designed to allow for potential inclusion of ECAs and private capital at a later stage.
- If private financing is introduced, the three measures must be amended accordingly:
 - **Measure 1 – Adjusted State financing:** The State's share of financing decreases when ECA, and private debt are introduced. This will likely increase the project's cost of capital, and thus debt servicing requirement. Risk allocation, however, may remain unchanged depending on the level of support and guarantees that ECAs and other private financiers require.
 - **Measure 2 – Enhanced CfD:** The CfD strike price would need to be adjusted to accommodate the higher debt servicing requirement resulting from the increase in cost of capital and DSCR (above 1.0) requirements.
 - **Measure 3 – Expanded guarantees:** Beyond the decommissioning fund, specific guarantees are likely to be required to attract private capital. Whether these guarantees have an impact on the State's EMU debt and budget must be carefully assessed based on the actual risk transfer from the State to private parties.

Initial phase – Fully public financing (continued)

- In conclusion, a phased financing strategy, starting with full public financing and allowing for future private participation, offers the best balance between affordability, strategic control, and adaptability.
- This approach aligns supports the Dutch State's policy objectives. It also ensures that the GSP remains responsive to future developments, while safeguarding financial and operational integrity of the nuclear power plant.



This confidential report (the "Report") was prepared for the Ministry of Climate and Green Growth (the "Client") by KPMG Corporate Finance, part of KPMG Advisory N.V. ("KPMG Corporate Finance") with regard to an assessment of a potential Government Support Package in relation to the Nuclear Newbuild Programme (the "Project"). This Report is exclusively for the benefit of and internal use by the Client and does not carry any right of publication or disclosure to any third party, without our prior written consent. Neither this report nor its content may be used for any other purpose without prior written consent of KPMG Corporate Finance.

This Report is incomplete without reference to and should be viewed solely in conjunction with the oral briefing provided or to be provided by KPMG Corporate Finance.

In preparing this Report, we have relied upon and assumed, without independent verification, the accuracy and completeness of any information available from public sources, third parties and information provided by, or on behalf of, the Client. We do not accept responsibility for such information and, as far as it relates to information provided by the Client, such information remains the responsibility of the management of the Client.

The procedures carried out by KPMG Corporate Finance do not constitute an audit or a review of the financial data in this Report or any other information supplied. Consequently, we do not express an opinion or any form of assurance on the information presented in this Report.

KPMG Corporate Finance will not be involved in any decision-making by the Client and will not act as management of the Client in any way.

We do not accept responsibility for any prospective financial information set out in this Report. We must emphasise that the realisation of the prospective financial information is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in trading patterns, cost structures or the direction of the business as emerge. We accept no responsibility for the realisation of the prospective financial information. Actual results are likely to be different from those shown in the prospective financial information because events and circumstances frequently do not occur as expected, and the differences may be material.

We do not accept or assume responsibility to anyone other than to the Client, for our work, for the report or for any judgements, findings, conclusions, recommendations or opinions that we have formed or made. We do not accept or assume responsibility to any other party as a result of provision of the report to such a party.

The work was undertaken and the report was issued on agreed terms of engagement in order that we might state to the Client those matters on which we agreed to report and for no other purpose. The report was not created for, and should not be treated as suitable for, any other purpose.

Project Split

Scoping document
- Model discussion

September 2025

Disclaimers

Disclaimers

We note that this report has been prepared by KPMG Advisory N.V. ("KPMG") for our client, the Dutch Ministry of Climate Affairs and Green Growth ("KGG"), to provide KGG insights into the working assumptions included in the financing and revenue models of project Split.

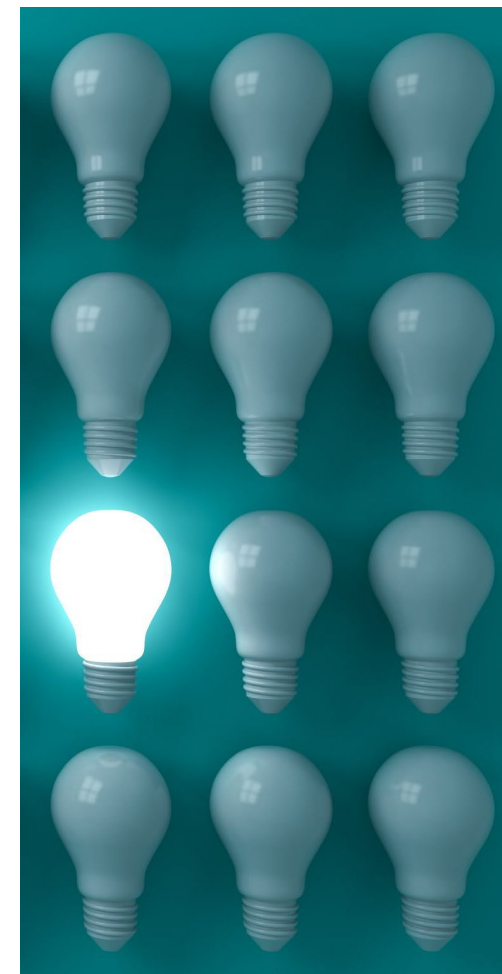
The report focuses on the key assumptions of the financial and revenue models. Other assumptions, for instance with regards to net working capital, are included in the models but not discussed in this report.

We note that the following disclaimers should be taken into account when reading the report:

- The working assumptions are based on information from public sources (we refer to the next page for an overview of the sources used in this report) and information provided by KGG:
 - We note that audit procedures are not a part of our scope, and that we have relied upon and assumed, without independent verification, the accuracy and completeness of any information available from public sources; and
 - We further note that the information presented in these sources employs varying levels of aggregation and differing underlying assumption. Moreover, these sources typically focus on particular geographies and technologies. Therefore, the findings of these studies may not be fully applicable to the context of Project Split.

Therefore, we stress that the working assumptions should only be considered as highly indicative;

- All figures included in this report are reported in 2025 real terms, unless explicitly stated otherwise;
- We note that the range specified in section 'Working assumptions' is based on KPMG analyses and does not necessarily correspond to the minimum or maximum estimates included in the public sources.
- This report has not been discussed with or has been subject to any factual validation of Westinghouse or EDF;
- KPMG does not act as a technical, legal, or tax advisor;
- Tax assumptions can deviate due to certain ruling;
- KPMG is not involved in the decision-making by KGG; and
- We refer to the last page of this report (page 22) for our general disclaimers.



Sources

Sources

Public studies:

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- ETI, The ETI Nuclear Cost Drivers Project, 2020
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Information from the European Commission:

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- Commission decision on the measure State aid SA.58207 (2021/N) which Czechia is planning to implement to support the construction and operation of a new nuclear power plant at the Dukovany site, 2024

Information from KGG:

- BNP Paribas, Dutch Nuclear Newbuild Program, 2024
- EY, Dutch Nuclear New Build Program: Remuneration models & financing structures, 2024

Annual reports:

- Annual reports of Elektriciteits Produktiemaatschappij ("EPZ")
- Annual reports of Teollisuuden Voima Oyj ("TVO")

Other sources:

- Capital IQ
- Bloomberg

Other

- The scoping document has integrated the feedback from KPMG United Kingdom on the previous version of the scoping document from 30 May 2025, leveraging their experience in supporting the development of nuclear power plants across Europe. Please note that this version of the scoping document did not include the financing assumptions.
- Several concept versions of the scoping document were revised by KGG, with feedback considered. Prior versions were shared on:
 - 27 February 2025
 - 30 May 2025
 - 27 June 2025
 - 06 August 2025

Working assumptions

Overview of working assumptions that are used in the funding model – General

	Assumption	Range, incl. which assumption is used	Description	Source
General	Inflation	Model: - 2025: 3.2% - 2026: 2.8% - Post-2026: 2.0%	- It is assumed that the inflation for the operation of the nuclear power plant ("NPP") is in line with the general inflation in the Netherlands. - Long-term inflation is based on the policy objectives of the ECB. - Note that construction cost inflation may deviate from general CPI inflation.	DNB ECB
	Capacity of the plant	Range: 1,110 MW or 1,650 MW Model: 1,650 MW (2x)	- Based on the discussion we understand that there are currently two reactors under consideration, one with a capacity of 1,110 MW and one with a capacity of 1,650 MW. - We understand that the plant will consist of two similar reactors.	KGG
	Availability factor ¹	Range: 75% - 95% Model: 90%	- The availability factor takes into account the anticipated number of planned and unplanned downtime. - The variability in the availability factor is influenced by the specific technology used and realisation of the project.	Various public sources
	Load factor	Range: 25% - 100% Model: 100%	- The load factor takes into account the actual time that electricity is generated. - The variability in the load factor is influenced by the ramp-up factor and load following. - The load factor increases gradually during the ramp-up phase, reaching the model-defined input level. - The load factor combined with the availability factor gives the total production profile	KGG

Notes:

- ¹ Modern nuclear power plants are typically capable of achieving availability factors exceeding 90%. However, as the plant ages, this figure tends to decline due to increased frequency of unplanned outages and general wear on components. This performance degradation is usually gradual and can be effectively mitigated through timely and sufficient lifecycle capital expenditure. In our modelling, we assume that such degradation is addressed through appropriate maintenance Capex, ensuring relatively stable operational performance over time. Given this assumption, we have adopted a constant availability factor of 90% throughout the operational phase.

Overview of working assumptions that are used in the funding model – Timeline of the project

	Assumption	Range, incl. which assumption is used	Description	Source
Timeline	Pre-development phase (feasibility) ⁽¹⁾	Range: 3.0 to 5.0 years Model: 3.0 years	• This phase includes the tender process, feasibility studies, public enquiry, initial permitting, market consultation, early-stage project development, and preliminary engineering.	KGG
	Development phase (detailed design) ¹	Range: 2.0 to 4.0 years Model: 2.0 years	• Detailed design, engineering, final permitting, financial structuring, and preparation for FID	KGG
	Construction phase ¹	¹ Range: 6 to > 14 years Model: 8 years	• The duration of the construction phase depends on the choice of the technology of the nuclear power plant.	KGG
	Operational phase, including ramp-up	Range: 50 to 70 years Model: 60 years	• Expected operational period in which ramp-up is being conducted as well as the full operational period. • The ramp-up period is anticipated to take two years. The ramp-up period is assumed to be financed by additional equity financing at the end of the construction period ²	Various public sources
	Decommissioning phase	Model: 10 years	• The first 5 years are assumed to be dedicated to cooling, fuel removal, and preparatory planning, followed by 5 years of full dismantling and decommissioning of the nuclear power plant.	IEA & OECD (2020)

Notes:

- ¹ Over the last decade a number of First of a Kind (“FOAK”) Gen-III projects experienced substantial delays in the construction time, with the two recently completed European projects Olkiluoto 3 and Flamanville 3, reporting delays of 14 years and 12 years respectively. Moreover, the ongoing projects in the United Kingdom, Sizewell C and Hinkley Point C, have reported substantial delays. Delays in the construction time have a large impact on the project financials, as costs of the project increase due to inflation and higher interest costs, whereas simultaneously potential revenues are postponed.

Looking at the current NPP projects in Poland, Czech Republic and Slovenia, we observe that the anticipated construction times (of 14, 12 and 6 years respectively) have increased as compared to the initial anticipated timelines for Olkiluoto 3 and Flamanville 3. Considering the recently finished and current NPP projects in Europe, we assume a construction time of 8 years.

- ² Public sources provide limited information about the ramp-up period. We understand that the NPPs in the Czech Republic are anticipated to have a ramp-up period of two years and have assumed the same duration as a working assumption.

Note: (1) In practice, the phases tend to overlap, but for the purposes of this report, we assume the phases are separated.

Overview of working assumptions that are used in the funding model – Initial Capex (1/4)

	Assumption	Range, incl. which assumption is used	Description	Source
Initial Capex 1	Owner costs - Pre-development phase (feasibility)	Range: 50 – 500 EUR/KW Model: ~100 EUR/KW (EUR 300 million)	- Owner's costs include for instance project development, studies, permitting, legal costs, owner's project management, and owner's engineering. These costs are incurred during the pre-development and development phase. - The client informed us that EUR 300 million will formally be notified to the European Commission for the first three years. It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	KGG
	Owner costs - Development phase (detailed design)	Range: 250 – 1,500 EUR/KW Model: ~500 EUR/KW (EUR 1,800 million)	- For the development phase, EUR 1,800 million is noted. This is calculated as the remaining Capex given the Capex during the pre-development and construction phase. - It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	Various public sources, KGG
	Engineering, Procurement, and Construction ("EPC") costs	Range: 6,700 – 11,500 EUR/KW Model: ~8,500 EUR/KW (EUR 27,900 million)	- The total Capex is assumed to be EUR 30,000 million, as discussed with the client. The Capex during the construction is estimated to be 93% of total Capex or EUR 27,900 million. - EPC costs are modelled using an S-curve distribution over the duration of the construction phase.	Various public sources, KGG
	Overnight costs	Range: 7,000 – 13,500 EUR/KW Model: 9,100 EUR/KW	Sum of the Owner's costs and the EPC costs. Total Capex is assumed to be EUR 30,000 million based on the assumption of KGG (in real 2025 terms)	Calculation, KGG
	Capitalised interest		- Interest is capitalised during the construction phase. - We refer to pages 15-19 for the assumptions with regards to financing.	KPMG Analysis

Notes:

- Initial Capex can be segmented into various subcategories, for instance construction materials, land, project development, et cetera. Deriving an accurate and robust estimation of the overnight costs necessitates an estimation of the various subcategories, allowing for adjustments to reflect project-specific considerations. However, we observe that public sources vary in their categorisation methods and primarily report the overnight costs on an aggregated basis. Based on the available public information, we are unable to provide robust estimations of the subcategories and instead have segregated the initial Capex in two categories, namely owner's costs which are assumed to be incurred during the (pre-) development phase, and EPC costs which are assumed to be incurred during the construction phase.

Overview of working assumptions that are used in the funding model – Initial Capex (2/4)

	Assumption	Range, incl. which assumption is used	Description	Source
Initial Capex ②	Owner costs - Pre-development phase (feasibility)	Range: 50 – 500 EUR/KW Model: ~100 EUR/KW (EUR 300 million)	- Owner's costs include for instance project development, studies, permitting, legal costs, owner's project management, and owner's engineering. These costs are incurred during the pre-development and development phase. - The client informed us that EUR 300 million will formally be notified to the European Commission for the first three years. It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	KGG
	Owner costs - Development phase (detailed design)	Range: 250 – 1,500 EUR/KW Model: ~500 EUR/KW (EUR 1,800 million)	- For the development phase, EUR 1,800 million is noted. This is calculated as the remaining Capex given the Capex during the pre-development and construction phase. - It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	Various public sources, KGG
	Engineering, Procurement, and Construction ("EPC") costs	Range: 6,700 – 11,500 EUR/KW Model: ~8,500 EUR/KW (EUR 27,900 million)	- The total Capex is assumed to be EUR 30,000 million, as discussed with the client. The Capex during the construction is estimated to be 93% of total Capex or EUR 27,900 million. - EPC costs are modelled using an S-curve distribution over the duration of the construction phase. ③	Various public sources, KGG
	Overnight costs	Range: 7,000 – 13,500 EUR/KW Model: 9,100 EUR/KW	Sum of the Owner's costs and the EPC costs. Total Capex is assumed to be EUR 30,000 million based on the assumption of KGG (in real 2025 terms)	Calculation, KGG
	Capitalised interest		- Interest is capitalised during the construction phase. - We refer to pages 15-18 for the assumptions with regards to financing.	KPMG Analysis

Notes:

- ② Capital expenditures during the (pre-)construction phase generally constitute the largest portion of the production costs of nuclear power, accounting in certain instances for more than 70% of the costs (in terms of LCOE).
- ③ EPC costs are modelled using an S-curve distribution, which reflects the typical expenditure profile of large-scale infrastructure projects, characterised by lower spending in early stages, peaking during peak construction, and tapering off towards completion. The specific year-by-year distribution percentages applied in the model have been provided by the client and is adapted to fit the assumed timelines (we refer to appendix I for the distribution).

Overview of working assumptions that are used in the funding model – Initial Capex (3/4)

	Assumption	Range, incl. which assumption is used	Description	Source
Initial Capex 4	Owner costs - Pre-development phase (feasibility)	Range: 50 – 500 EUR/KW Model: ~100 EUR/KW (EUR 300 million)	- Owner's costs include for instance project development, studies, permitting, legal costs, owner's project management, and owner's engineering. These costs are incurred during the pre-development and development phase. - The client informed us that EUR 300 million will formally be notified to the European Commission for the first three years. It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	KGG
	Owner costs - Development phase (detailed design)	Range: 250 – 1,500 EUR/KW Model: ~500 EUR/KW (EUR 1,800 million)	- For the development phase, EUR 1,800 million is noted. This is calculated as the remaining Capex given the Capex during the pre-development and construction phase. - It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	Various public sources, KGG
	Engineering, Procurement, and Construction ("EPC") costs	Range: 6,700 – 11,500 EUR/KW Model: ~8,500 EUR/KW (EUR 27,900 million)	- The total Capex is assumed to be EUR 30,000 million, as discussed with the client. The Capex during the construction is estimated to be 93% of total Capex or EUR 27,900 million. - EPC costs are modelled using an S-curve distribution over the duration of the construction phase.	Various public sources, KGG
	Overnight costs	Range: 7,000 – 13,500 EUR/KW Model: 9,100 EUR/KW	Sum of the Owner's costs and the EPC costs. Total Capex is assumed to be EUR 30,000 million based on the assumption of KGG (in real 2025 terms)	Calculation, KGG
	Capitalised interest		- Interest is capitalised during the construction phase. - We refer to pages 15-18 for the assumptions with regards to financing.	KPMG Analysis

Notes:

- 4 Public sources estimate overnight costs for new NPPs between ~2,000 EUR/KW (IEA–OECD, 2020) and 13,500 EUR/KW (MIT, 2024)¹. Western projects tend to be more expensive due to limited experience, higher labour/material costs, and stricter regulations. Recent studies show rising cost trends, with current projects in Poland, Czech Republic, and Slovenia at the high end. We assume a range of 7,000–13,500 EUR/KW, the model uses a client-assumed Capex of EUR 30,000 million, or 9,100 EUR/KW for two 1,650 MW reactors.

Note: (1) The lowest anticipated overnight costs for new build NPP the IEA – OECD amounts to 2,157 USD/KW, whereas MIT estimates the overnight costs for a FOAK reactor to amount to 15,000 USD/KW. Please note that the figures have been converted to EUR based on an exchange ratio of 1.10 USD/EUR.

Overview of working assumptions that are used in the funding model – Initial Capex (4/4)

	Assumption	Range, incl. which assumption is used	Description	Source
Initial Capex	Owner costs - Pre-development phase (feasibility)	Range: 50 – 500 EUR/KW Model: ~100 EUR/KW (EUR 300 million)	- Owner's costs include for instance project development, studies, permitting, legal costs, owner's project management, and owner's engineering. These costs are incurred during the pre-development and development phase. - The client informed us that EUR 300 million will formally be notified to the European Commission for the first three years. It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	KGG
	Owner costs - Development phase (detailed design)	Range: 250 – 1,500 EUR/KW Model: ~500 EUR/KW (EUR 1,800 million)	- For the development phase, EUR 1,800 million is noted. This is calculated as the remaining Capex given the Capex during the pre-development and construction phase. - It is assumed that the costs are evenly distributed over the duration of the pre-development phase.	Various public sources, KGG
	Engineering, Procurement, and Construction ("EPC") costs	Range: 6,700 – 11,500 EUR/KW Model: ~8,500 EUR/KW (EUR 27,900 million)	- The total Capex is assumed to be EUR 30,000 million, as discussed with the client. The Capex during the construction is estimated to be 93% of total Capex or EUR 27,900 million. - EPC costs are modelled using an S-curve distribution over the duration of the construction phase.	Various public sources, KGG
	Overnight costs	Range: 7,000 – 13,500 EUR/KW Model: 9,100 EUR/KW	Sum of the Owner's costs and the EPC costs. Total Capex is assumed to be EUR 30,000 million based on the assumption of KGG (in real 2025 terms)	Calculation, KGG
	Capitalised interest		- Interest is capitalised during the construction phase. - We refer to pages 15-18 for the assumptions with regards to financing.	KPMG Analysis

Please note that these Capex figures are expressed in 2025 real terms and are independent of the capital structure. As such, they exclude any increases due to inflation or interest payments.

Overview of working assumptions that are used in the funding model – Revenues

	Assumption	Range, incl. which assumption is used	Description	Source
Revenues	Electricity market price	Model: 75 EUR/MWh ²	• The electricity market prices are based on Dutch power futures and market reports	Various public sources, including Dutch power futures
	Contract for Difference (“CfD”) ¹	[XX] EUR/MWh	• Is build up as a top-up and serves as a plug depending on scenario analyses • CFD is dynamic based on market price developments and cash requirements, and is recalculated after 20 quarters based on EC guidance • The CfD will start after the ramp-up period is completed and is eligible for taxes	KPMG Analysis
	Electricity output	Calculation	• Capacity * Monthly maximum full load hours * Availability factor * Load factor	KPMG Analysis
	Electricity revenue	Calculation	• (Electricity market price +/- CfD top-up) * Electricity output	KPMG Analysis
	Other revenues	1.0% of electricity revenue	• Other revenues include among others capacity availability fees and revenues from grid balancing services ³	KGG

Notes:

- ¹ The CfD is calculated to cover all projected cash shortfalls over the next 20 quarters (5 years). It is assumed that there is no required return on equity, therefore the CfD is only triggered if cumulative cash flows over this period are expected to be negative. The CfD value represents the required top-up to bring net cash flow to zero, which is not market conform and is not taking any risks into account. The CfD value is weighted by expected output to determine the required top-up above the market price per period. This defines the strike price needed to ensure financial viability over the CfD period.
- ² Please note that the electricity price of 75 EUR/MWh represents the average price during the year. Electricity prices exhibit seasonality, with higher price typically being paid during the winter months. Moreover, volatility in the electricity market (demand and production) cause load following considerations (dispatching). Given the scope of procedures and information available seasonal and load following considerations are not incorporated into the model other than an illustrative sensitivity analysis.
- ³ Public sources provide limited information with regards to other revenues, as these revenues tend to be country-specific. In a country with considerable grid imbalances, such as the Netherlands, revenues from grid balancing services may potentially be significant.¹

From the annual report of EPZ of 2023 we observe that the other revenues, comprising primarily of revenues from grid balancing services,² amount to approximately 5.0% of electricity revenue. Due to uncertainty around the business case for availability and grid balancing fees, a conservative percentage is assumed and held constant throughout the operational phase.

Note: (1) We note that if the plant is used for grid balancing, this will impact the load factor. The load factor is currently based on public sources which consider plants throughout the world. As a working assumption we have assumed that the combination of the other revenues and the load factor already takes into account grid balancing.

Note: (2) The annual report of EPZ presents the other revenues on aggregated basis, without specifying the size of the individual revenue sources.

Overview of working assumptions that are used in the funding model – Operating costs including maintenance (1/2)

	Assumption	Range, incl. which assumption is used	Description	Source
Operating costs	Operation & maintenance ("O&M") costs ²	Range: 15 – 26 EUR/MWh Model: 18 EUR/MWh	O&M costs include among others material costs, maintenance costs, and personnel expenses.	Various public sources
	Fuel costs - procurement	Range: 6 – 10 EUR/MWh Model: 5 EUR/MWh	- Nuclear power plants primarily use uranium as fuel. - It is assumed that one fuel cycle takes 1 year. - It is assumed that the procurement term for fuel is 2 years. - Thus, the cash out in relation to fuel payment is 3 years in advance.	KGG
	Fuel costs – storage and disposal	Model: 5 EUR/MWh	Storage and disposal costs are assumed to be incurred gradually and are estimated at 50% of the total fuel cost.	KGG
	Insurance	Model: 0.5 EUR/MWh	While certain events (large-scale environmental disasters) cannot be covered by insurance policies, other risks such as property risks are typically insured.	KGG
¹	Total operating costs	Range: 25 – 40 EUR/MWh Model: 29 EUR/MWh (rounded)	Sum of the O&M costs, fuel costs and insurance costs	Calculation

Notes:

- ¹ As compared to the Capex estimates, the operating costs exhibit a higher degree of certainty and constitute a relatively smaller portion of the production costs (in terms of LCOE).
- ² We observe that most public sources provide an estimate of the O&M costs excluding the fuel costs and insurance costs. In certain instances, the O&M costs are split into fixed and variable components. We note that the impact of such a division is limited, as it is assumed that the NPP will operate at a constant production level during the operational period (with the exception of the ramp-up period).

Moreover, we understand that O&M costs, in particular the maintenance costs, typically increase as the plant matures. We note that public sources provide limited guidance with regards to the exact impact of maturation on O&M costs. Therefore, as a current working assumption, we have assumed that the O&M costs remain constant during the operational phase (in real terms).

Overview of working assumptions that are used in the funding model – Operating costs including maintenance (2/2)

	Assumption	Range, incl. which assumption is used	Description	Source
Operating costs	Operation & maintenance ("O&M") costs	Range: 15 – 26 EUR/MWh Model: 18 EUR/MWh	O&M costs include among others material costs, maintenance costs, and personnel expenses.	Various public sources
	Fuel costs - procurement	Range: 6 – 10 EUR/MWh Model: 5 EUR/MWh	- Nuclear power plants primarily use uranium as fuel. - It is assumed that one fuel cycle takes 1 year. - It is assumed that the procurement term for fuel is 2 years. - Thus, the cash out in relation to fuel payment is 3 years in advance.	KGG
	Fuel costs – storage and disposal	Model: 5 EUR/MWh	Storage and disposal costs are assumed to be incurred gradually and are estimated at 50% of the total fuel cost.	KGG
	Insurance ³	Model: 0.5 EUR/MWh	While certain events (large-scale environmental disasters) cannot be covered by insurance policies, other risks such as property risks are typically insured.	KGG
	Total operating costs	Range: 25 – 40 EUR/MWh Model: 29 EUR/MWh (rounded)	Sum of the O&M costs, fuel costs and insurance costs	Calculation

Notes (continued):

- ³ The insurance costs are contingent on upon the regulations and agreements established between the State and the NPP owner regarding risk allocation (i.e. which risks are borne and need to be insured by the NPP owner). Since these policies differ per country, the insurance costs are country-specific. Based on the annual report of EPZ (2023), the insurance costs in the Netherlands seem limited relative to the total operating costs.¹ We assume the new-build NPP will fall under the same insurance regime and apply the premium as a fixed absolute amount. As a result, the relative insurance cost (in EUR/MWh) does not scale proportionally and deviates from the benchmark.

Based on operating costs of 28.5 EUR/MWh, the annual operating costs amount to approximately EUR 371 million for the 1,650 MW reactor (in 2025 real terms).

Note: (1) We note that in the annual report of EPZ (2023) insurance costs are included as part of other operating expenses, which represent approximately 8% of total operating costs.

Overview of working assumptions that are used in the funding model – Decommissioning

	Assumption	Range, incl. which assumption is used	Description	Source
Decommissioning	Decommissioning costs	Range: EUR 1,500m – EUR 4,500m (Real 2025) Model: EUR 3,000m	We note that a decommissioning provision is funded during the operational phase. It is assumed that the decommissioning is fully funded after 50 years of operations, allowing the fund to transition to lower-risk assets in the final period.	KGG; IEA & OECD (2020), KPMG Analysis;
	Return on invested capital	Model: 4.0% annual return on invested capital	It is assumed that the capital invested in the decommissioning fund will yield a 4.0% annual return. Note that the expected return differs over time and will most likely decrease when the start of decommissioning is close-by (to reflect the need for lower risk instruments).	KGG, KPMG Analysis
	Annual contribution to the decommissioning provision	Calculation	The annual contribution to the decommissioning provision is calculated in the model based on the anticipated timing of the decommissioning, the anticipated costs, and the return on invested capital.	KPMG Analysis
	Guarantee fee	Model: 0.1% per quarter over provision gap	- Dutch law (Article 15f of the Kernenergiewet) requires a financial provision to fully cover decommissioning costs. - While this provision is being built up, it is assumed that the Dutch State charges a guarantee fee to cover the shortfall, in line with the financial security mechanisms of the related law.	KPMG Analysis, KGG

As the decommissioning is anticipated to start after 60 years of operations, the costs in nominal terms will be substantially higher.

Overview of working assumptions that are used in the funding model – Financing – Government equity and debt (1/2)

Financing

Based on the assumptions outlined in the preceding pages, KPMG calculates the funding gap, if any, which pertains to the deficiency in expected returns (i.e. the project's future free cash flows yield a negative net present value) and the financing gap which illustrates the shortfall in available financing. The state support package will need to address both the funding gap and the financing gap.

The financing assumptions are based on publicly available sources and client-provided information. These assumptions were discussed in a dedicated session with both the Client and the Ministry of Finance. The assumptions serve as input for the scenario analyses. For the analysis, we assume a fully financed project.

	Assumption	Range, incl. which assumption is used	Description	Source
Government equity	Commitment value	Committed EUR 14,000m, but depending on assumption to cover full Capex if required in specific scenario	- The commitment value that has been made available by the Dutch state via the Dutch climate fund is EUR 14,000m - The commitment value and the apportionment of this commitment into equity and debt varies per scenario. - Covers specific Capex packages as well as other costs (i.e. arrangement fees)	KGG KPMG Analysis
	Equity-specific assumptions:			
	Drawdown period	Model: as soon as first investments / expenses are assumed	Depending on other financing sources committed the drawdown may be postponed.	KGG
	Dividends ¹	To be determined	It is assumed that no dividends are paid during the (pre-)construction phase.	KPMG Analysis

Notes:

- ¹ The model does not define an explicit dividend policy, instead, all cash flows available for equity (injections and distributions) are used in an internal rate of return ("IRR") calculation, reflecting total shareholder return over time. Distributions are assumed to equal all free cash flow available to shareholders, net of required reserve accounts contributions. The dynamic CfD mechanism adjusts to projected cash flows, helping prevent structural overcompensation (i.e. lowering when the cash shortfall decreases). Required reserve accounts are included to retain cash that cannot be distributed, in line with lender and project agreement requirements.

Overview of working assumptions that are used in the funding model – Financing – Government equity and debt (2/2)

Financing

Based on the assumptions outlined in the preceding pages, KPMG calculates the funding gap, if any, which pertains to the deficiency in expected returns (i.e. the project's future free cash flows yield a negative net present value) and the financing gap which illustrates the shortfall in available financing. The state support package will need to address both the funding gap and the financing gap.

The financing assumptions are based on publicly available sources and client-provided information. These assumptions were discussed in a dedicated session with both the Client and the Ministry of Finance. The assumptions serve as input for the scenario analyses. For the analysis, we assume a fully financed project.

	Assumption	Range, incl. which assumption is used	Description	Source
Government debt	Debt-specific assumptions:			
	Drawdown period	Model: Start of the tender process period		KGG
	Tenor	Range: 0 to 30 years Model: 30 years	The upper limit of the range is based on a case study on Dukovany.	KPMG Analysis
	Interest rate ²	Range: 0-3.75%	- An interest rate of 0% is applied pre-COD, which as a result, does not lead to accrued interest pre-COD. - An interest rate of 3.75% rate is applied post-COD, based on the Dutch government bond yield of 2.75% (as of 1 January 2025) plus a 1% risk premium.	KGG, KPMG Analysis
	Arrangement fee	0Bps	Government debt is assumed to be free of arrangement fee	KPMG Analysis
	Commitment fee	0Bps	Government debt is assumed to be free of commitment fee	KPMG Analysis

² In line with the Dukovany case, the post-COD interest rate is set as the government bond yield plus a 1% risk premium. The bond yield is fixed at 2.75% as of 1 January 2025. The 1% premium reflects risk compensation (e.g. cost overruns) and ensures market alignment in the context of State support. A 0% interest rate is applied during construction (pre-COD), resulting in no capitalised interest and lower modeled construction costs. This financing structure is approved by the European Commission for the Dukovany case.

Overview of working assumptions that are used in the funding model – Financing – ECA debt

		Assumption	Range, incl. which assumption is used	Description	Source
ECA debt		Commitment value	Ticket size: EUR 5,000m Model: Depends on the specific scenario	- Debt drawdown follows the schedule of Capex packages. - We assume commitment will start at FID	2 KPMG Analysis, KGG, Sizewell C
		Interest rate	Range: The ECA interest rate will be calculated as the CIRR Model: 5%	- Interest is based on an actual/360 calculation - The margin is assumed to be constant over time - It is now assumed that the interest is accrued until the start of the operations - Is assumed to cover agency fee, guarantee fee, and swap fee - As a working assumption 5% is assumed, which is expected to be at the lower end of the range	KPMG Analysis, KGG
		Arrangement fee 1	Range: 100bps to 200bps Model: 150bps	- The arrangement fee is charged by a lender for setting up a loan. It is paid at the commitment date, treated as an expense, and will be funded by equity - Expressed as a percentage of the total commitment	KPMG Analysis
		Commitment fee 1	Model: 35% on the interest margin	- Is a charge that a lender imposes for making funds available to a borrower under a line of credit or loan commitment - Expressed as an annual percentage on the margin of the undrawn funds	KPMG Analysis
		Tenor	Range: 0 to 22 years Model: 20 years	Is to be measured from the start of operations (after the ramp-up period) as per OECD guidelines	KPMG Analysis
		Repayment is pari-passu		- Debt repayments to lenders will linear and Pari-Passu (equal footing), as every lender will require a similar risk profile as other lenders - Debt repayments begin after the ramp-up period at the start of operations.	KPMG Analysis

Notes:

- 1 These values are based on general project finance inputs.
- 2 Debt is drawn proportionally to the remaining Capex, based on the ratio of the committed facility to the outstanding investment need. This ensures that the full commitment is precisely drawn by COD, aligning drawdown with the construction timeline. Additionally, ticket size is based on the GBP 5,000 million debt commitment at FID by the French ECA for Sizewell C. For simplicity, we assume EUR equals GBP.

Overview of working assumptions that are used in the funding model – Financing – Senior debt

	Assumption	Range, incl. which assumption is used	Description	Source
Senior debt	Commitment	Ticket size: EUR 5,000m Model: Depends on the specific scenario	- Debt drawdown follows the schedule of Capex packages. - We assume commitment will start at 3 years before ramp-up	BNP Paribas Dutch Nuclear Newbuild program p.17, KGG
	Interest rate	Model: 8%	- Interest is based on an actual/360 calculation - The margin is assumed to be constant over time - It is now assumed that the interest is accrued until the start of the operations, - Is assumed to cover agency fee, guarantee fee, and swap fee	KGG
	Arrangement fee ¹	Range: 100bps to 200bps Model: 150bps	- The arrangement fee is charged by a lender for setting up a loan. It is paid at the commitment date, treated as an expense, and will be funded by equity - Expressed as a percentage of the total commitment	KPMG Analysis
	Commitment fee ¹	Model: 35% on the interest margin	- Is a charge that a lender imposes for making funds available to a borrower under a line of credit or loan commitment - Expressed as an annual percentage on the margin of the undrawn funds	KPMG Analysis
	Tenor	Range: 7 to 20 years Model: 20 years	- Is to be measured from the start of operations (after the ramp-up period) - Assumed to be in line with ECA financing	KPMG Analysis
	Repayment is pari-passu		- Debt repayments to lenders will linear and Pari-Passu (equal footing), as every lender will require a similar risk profile as other lenders - Debt repayments begin after the ramp-up period at the start of operations.	KPMG Analysis

Notes:

- ¹ These values are based on general project finance inputs.
- ² Debt is drawn proportionally to the remaining Capex, based on the ratio of the committed facility to the outstanding investment need. This ensures that the full commitment is precisely drawn by COD, aligning drawdown with the construction timeline. In addition, according to BNP Paribas, debt ticket sizes vary substantially by investor type, ranging from EUR 50m to EUR 1,000m, and can be combined with multiple investors to achieve the required total financing.

Overview of working assumptions that are used in the funding model – Financing

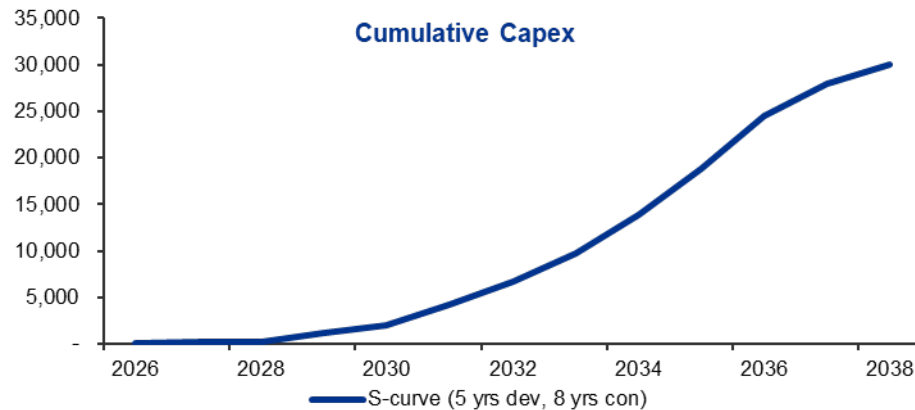
	Assumption	Range, incl. which assumption is used	Description	Source
General debt assumptions	Drawing order	n.a.	Commitments that are active simultaneously are drawn in proportion to each other	KPMG Analysis
	Refinancing	2 refinancing options	- The refinancing option is currently not used, but it is built into the model and has the same options as the debt module for the construction phase - Refinancing is assumed to be used in the operations phase - The market for private financing is not expected to cover full refinancing at once, hence it is possible to partially refinance debt	KPMG Analysis
	Target debt ratio	Depending on scenario	In case specific ratios should be targeted this requires optimisation of the various funding sources.	KPMG Analysis

Appendix

Appendix I: Capital expenditure distribution assumption

Capex assumption - Project Split

€m	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Phase	Feasibility	Feasibility	Feasibility	Development	Development	Construction	Construction	Construction	Construction	Construction	Construction	Construction	Construction
New S-curve (5 dev, 8 con)	100	100	100	900	900	2,100	2,500	3,000	4,200	5,000	5,600	3,400	2,100
%	0.3%	0.3%	0.3%	3.0%	3.0%	7.0%	8.3%	10.0%	14.0%	16.7%	18.7%	11.3%	7.0%
Cumulative	100	200	300	1,200	2,100	4,200	6,700	9,700	13,900	18,900	24,500	27,900	30,000
%	0.3%	0.7%	1.0%	4.0%	7.0%	14.0%	22.3%	32.3%	46.3%	63.0%	81.7%	93.0%	100.0%



All Capex figures are in real 2025 terms.

The figure on the left side shows the cumulative distribution of the Capex over the development and construction phase and reflects the assumed 's-shape' or yearly timing of the Capex assumptions.



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