Submission on the Draft 2026 ISP Addendum and Related Transparency Matters

1. Executive summary

This submission raises serious concerns that the Draft 2026 ISP Addendum does not sufficiently demonstrate:

- transparent and reproducible derivation of least-cost development paths
- consistent application of whole-of-system least-cost optimisation principles
- adequate disclosure of how transmission expansion is balanced against non-network alternatives
- clear separation between regulated monopoly transmission investment and competitive system services
- sufficient treatment of lifecycle emissions, system strength, and infrastructure supply-chain risk
- robust justification for major interconnector-led development pathways

While the modelling framework presented by AEMO appears detailed, the transparency of decision filtering—from thousands of candidate development paths to a small set of candidate development paths—remains insufficient for independent verification.

This creates a structural risk that outcomes are being impractically contrived and will be technically optimised within model boundaries but not demonstrably optimal for consumers under full system reality constraints.

2. Lack of transparency in reduction from ~2,000 development paths to final candidate set

The Addendum confirms a staged reduction:

~2,000 potential development paths

reduced to 23 candidate development paths (CDPs)

then further refined through iterative modelling.

However, the documentation does not clearly explain:

- how grouping logic is applied (geographic, technology, or network corridor clustering)
- what thresholds determine elimination versus progression
- how correlation between transmission and generation options is handled
- how sensitivity to assumptions (fuel price, demand, retirements) affects pruning decisions.

Core issue

Without explicit disclosure of:

- intermediate ranking distributions
- discarded pathway characteristics
- statistical clustering criteria

it is not possible for stakeholders to independently verify whether:

- economically superior but non-conforming pathways are being prematurely excluded.

3. Risk of structural bias toward transmission-led solutions

While the ISP framework is described as technology-neutral, stakeholder analysis of the process suggests a definite bias introduced by:
•early identification of network “flow path needs” in SSLT modelling
•propagation of those signals into DLT refinement stages
•reinforcement of transmission options through iterative feasibility filtering
This creates a risk that:
•transmission becomes an enabling assumption rather than an outcome of full system optimisation.
This is particularly relevant where far superior alternative solutions exist, including:
•present, refurbished and new Coal Power Stations as well as future Nuclear Power Plants in key positions ie. locational generation alternatives

4. System strength and non-network alternatives are not fully integrated into least-cost comparison
The Addendum describes system strength constraints and supports mechanisms (including synchronous condensers and inverter-based solutions), however:
•these are not consistently evaluated on a unified least-cost basis against generation alternatives
•system strength procurement remains partially separated from transmission optimisation

Concerns this may lead to:
•duplication of system strength assets across multiple regulatory streams
•inconsistent valuation of inertia and fault level services
•under-recognition of existing synchronous generation value (including coal and gas units while operational)
A fully integrated optimisation framework should explicitly compare:
•transmission augmentation
•synchronous condensers
•grid-forming inverters
•dispatchable generation contributions
on a consistent system service basis.

5. Lifecycle emissions and embedded infrastructure impacts are not fully accounted for
The ISP framework primarily focuses on operational system costs and emissions trajectories. However, it does not comprehensively incorporate:
•mining and refining impacts of materials
•toxic contaminating ‘RENEWABLES’ - THE ASBESTOS OF THE FUTURE - poisonous to our life-sustaining land, vital water sources, precious biodiversity and THE PUBLIC.
•manufacturing emissions for:
•solar PV
•batteries

•transmission equipment
•transport and construction emissions at system scale
•end-of-life disposal and recycling burdens for toxic ‘renewable’ components.

Critical implications mean:
•the optimisation is based on operational efficiency only rather than full lifecycle system footprint.
Given the scale of infrastructure expansion, this materially understates:
•total emissions responsibility
•environmental externalities
•resource intensity of system transformation

6. SF_6 and high-impact industrial gases are not explicitly monetised in optimisation
As noted in external scientific reporting (including BBC reporting on SF_6 usage), SF_6 remains a highly potent greenhouse gas used in electrical switchgear.
While industry transition is underway, the ISP framework:
•does not explicitly price SF_6 leakage risk into optimisation
•does not differentiate between SF_6-intensive and SF_6-free network design pathways in cost-benefit weighting
This creates an obvious blind spot in:
•long-term environmental risk assessment
•equipment lifecycle emissions comparison

7. Interconnector expansion dominance and system lock-in risk
The ISP process continues to identify large-scale interconnector and transmission projects as key system enablers.
However, rural stakeholders remain vehemently opposed “OVER OUR DEAD BODIES” because:
•interconnector expansion controlled by China is prioritised instead of far superior Australian benefiting Coal alternatives that don’t need these Interconnectors.
•long-lived regulated assets lock in unbearable, unjust tariff obligations
•alternative modular solutions are underrepresented due to ideological modelling structure

The Regulatory Investment Test framework administered by Australian Energy Regulator requires demonstration of net market benefits, however:
•electricity consumers are being ignored
•the aggregation of modelling assumptions across long horizons masks short-to-medium term flexibility alternatives.

8. Concentration of transmission development within a small number of network corporations
The dominance of a small number of transmission network service providers—particularly

predatory bully Transgrid—raises serious structural concerns regarding:
•information asymmetry between proponent and regulator
•limited external counter-modelling capacity
•reliance on proponent-supplied cost assumptions
•constrained transparency in option development pipelines

Example stakeholder complaints (Wagga Wagga - SW NSW region)
Stakeholder submissions referenced:
•the Wagga Cabal of Secrecy - with NO Public Meeting ever held by TransGrid to validly consult the people of Wagga Wagga City.
•congestion constraints impacting the unwanted, toxic contaminating and useless Wagga Solar Electricity Generating Works at Bomen that needs immediate removal.
•lack of transparency with TransGrid's secret energy business, sneaky underhanded plans like huge BESS are wrongly exhibited as a Modification - such as Gregadoo Solar Mod 4 - when Gregadoo Solar has NEVER included a BESS!
•unacceptably dangerous, sagging Project Energy Connect that's sabotaging the Grid - must be stopped and dismantled - hanging over the highway at Uranquinty and throughout the South West - as admitted to in the REZ Inquiry Hearing 31/03/2026 by the Head of Regional Integration, Planning, Integration and Passenger Division, Transport for NSW.
Why is the Regulator continually ignoring TransGrid and 'Renewable' Failures, complete Lack of Social Licence and Public Health and Safety?

9. Northern Transmission Project illustrates uncertainty in optimisation sensitivity
The Northern Transmission Project analysis highlights a key issue:
•inclusion/exclusion of a single major project materially alters:
•generation mix
•net market benefit outcomes
•regional investment signals
However, the Addendum indicates:
•results are still under refinement
•sensitivity depends heavily on assumptions such as:
•industrial load growth
•policy settings
•regional generation mix

Core concern
If project viability is highly sensitive to assumptions that are still evolving, then:
•the robustness of deterministic ranking between CDPs is inherently limited.

10. National security and supply chain resilience is not explicitly embedded in optimisation
The ISP optimisation process does not explicitly include:

•supply chain concentration risk
•cyber-physical system exposure from inverter-based assets
•dependency on imported grid-critical components
•geopolitical risk weighting of infrastructure inputs
This is an extremely serious structural gap in treating electricity infrastructure as:
•critical national infrastructure rather than purely an economic optimisation problem.

11. Conclusion
The Draft 2026 ISP Addendum demonstrates an ideologically modelled framework, that does not adequately resolve key structural issues:
•insufficient transparency in pathway reduction logic
•incomplete integration of lifecycle emissions
•separation between transmission and system strength optimisation
•bias toward transmission-led expansion pathways
•no inclusion at all of national security risks and unethical, insecure supply chains
•uncertainty sensitivity in major project selection (including Northern Transmission outcomes)

From a system governance perspective, the current framework risks:
•reinforcing monopoly transmission expansion as the primary system solution
without considering far superior, cheap, reliable, safe and secure, long proven Australian Coal Power that works on demand and needs none of the costly Interconnectors at all.
•shifting insecure system risk and impossible, bankrupting costs onto consumers forever without full lifecycle visibility
•embedding long-term infrastructure commitments without observable optimisation pathways

12. Recommended Reforms
A revised ISP methodology must require:
•Full disclosure of intermediate development path pruning logic
•Unified optimisation of system strength, generation, transmission
•Mandatory, full lifecycle emissions accounting
•Explicit prioritisation of national security and supply chain risks
•Transparent, practical facts provided by reputable, independent experts with no vested interests comparing:
transmission for pathetically intermittent Solar/Wind generators vs non-network alternatives vs Australian base-load Coal Power.

Draft 2026 ISP Addendum Consultation Submission

POINT-BY-POINT REBUTTAL – DRAFT 2026 ISP ADDENDUM

1. Claim: "~2,000 development paths were reduced to 23 candidate development paths using structured modelling"

AEMO position

AEMO states that:

SSLT identifies broad system needs

DLT refines options

branch-and-bound methods reduce combinations to manageable CDPs

Rebuttal

This explanation is procedural but not transparent in substance.

It does NOT disclose:

how the 2,000 paths were initially constructed

what weighting or grouping rules were applied

what statistical or economic thresholds determined elimination

how correlation between transmission and generation choices was treated

Core flaw

The process is effectively a black-box reduction pipeline:

Inputs are disclosed, outputs are disclosed, but intermediate elimination logic is not independently reproducible.

Impact

This prevents stakeholders from verifying whether:

economically superior but non-conforming pathways were discarded too early

transmission-heavy pathways were structurally favoured

2. Claim: "SSLT identifies network flow paths indicating augmentation needs"

AEMO position

SSLT provides:

long-horizon optimisation

linearised transmission expansion signals

early indication of network requirements

Rebuttal

This introduces a structural bias at the earliest modelling stage.

By defining "flow path needs" first, the model:

implicitly prioritises transmission expansion as the default solution

constrains later-stage optimisation (DLT) within transmission-defined boundaries

Core issue

This violates true neutrality because:

the network solution space is pre-shaped before full system competition occurs.

Result
Alternative system designs such as far superior base-load Coal Power Stations and future Nuclear Power Plants at key locations with existing transmission lines - are not explored on equal structural footing.

3. Claim: "DLT refines least-cost DP using iterative branch-and-bound selection"
AEMO position
multiple DPs generated
ranked by total system cost
low-cost options retained, high-cost removed
Rebuttal
The method is not fully transparent in its economic decision thresholds.
Missing disclosures:
cost difference thresholds for "statistically close" DPs
weighting across scenarios
sensitivity bands used to retain or eliminate options
penalty assumptions for timing differences
Core flaw
Without threshold transparency:
"least-cost" becomes a relative ranking, not a reproducible optimisation result.
This allows:
small modelling differences to change structural outcomes
opaque pruning of alternatives before full comparison

4. Claim: "Projects are removed if they show high system cost or low benefit"
AEMO position
low-performing DPs are eliminated progressively
only economically efficient combinations proceed
Rebuttal
This assumes the model correctly captures:
all relevant system costs
all system benefits
all externalities
But it does NOT include:
full lifecycle emissions (mining, processing, manufacturing, transportation, construction, operational hazards, removal, remediation, disposal)
supply chain constraints or geopolitical risk
full system strength substitution equivalence
full cyber-physical security risk
Core flaw
The optimisation is:

partial-system cost minimisation, not full-system real-world cost optimisation.

5. Claim: "Transmission, generation, and storage are co-optimised"
AEMO position
All technologies are considered within the modelling framework.
Rebuttal
Co-optimisation is procedurally true but structurally unequal:
transmission is introduced via early flow-path constraints (SSLT)
generation and storage are reactive within those constraints
system strength is treated as a constraint service rather than a competing asset class
Core issue
This leads to:
transmission-led optimisation bias disguised as neutral co-optimisation.

6. Claim: "System strength is addressed through integrated modelling and supporting mechanisms"
AEMO position
System strength requirements are managed through:
synchronous condensers
inverter-based solutions
network planning constraints
Rebuttal
There is no single unified cost comparison framework across:
synchronous generation (coal/gas inertia contribution)
synchronous condensers
grid-forming batteries
inverter-based stabilisation systems
Core flaw
System strength is:
modelled as a constraint requirement, not a fully optimised market service.
This risks:
duplicative investment across technologies
over-procurement of regulated assets
under-utilisation of naturally synchronous generation assets

7. Claim: "The ISP reflects least-cost system outcomes across scenarios"
AEMO position
ODP is selected based on:
weighted net market benefit
scenario robustness
risk assessment

Rebuttal
This is not a full-system least-cost result, because:
Missing cost dimensions include:
Australian base-load Coal Power using existing transmission lines
embedded lifecycle emissions of infrastructure build
full supply chain cost volatility
geopolitical dependency risk
asset decommissioning costs
toxic contamination impacts
Public Health & Safety implications
systemic redundancy between overlapping infrastructure types
Core flaw
The result is:
least-cost within model boundaries, not least-cost across full real-world system lifecycle.

8. Claim: "CDPs represent adaptable investment pathways under uncertainty"
AEMO position
CDPs provide flexible alternatives
allow comparison of different development strategies
Rebuttal
CDPs are derived from:
already filtered DP pool
heavily reduced candidate set
transmission-influenced initial structure
Core issue
CDPs are not truly independent pathways — they are:
variations of a pre-filtered transmission-led optimisation universe.

9. Claim: "Northern Transmission Project analysis shows fine balance and requires further study"
AEMO position
project is borderline economically
included in sensitivity CDPs
further analysis underway
Rebuttal
This demonstrates a key structural weakness:
small modelling changes materially alter inclusion/exclusion
CDP ranking sensitivity is high
decision boundary is not robust
Core issue
If outcomes shift materially with small assumptions:

the optimisation is not decision-robust enough for irreversible infrastructure commitments.

10. Claim: "Stakeholder transparency is addressed through published methodology and appendices"

AEMO position

methodology documents published
appendices describe process
modelling framework is disclosed

Rebuttal

Publication of methodology ≠ transparency of decision logic.

Missing:

intermediate datasets (discarded pathways)
full ranking distributions
elimination thresholds
sensitivity decomposition of outcomes
reproducibility data for independent verification

Core flaw

Stakeholders can see:
"how the system is supposed to work," but not "why specific outcomes occurred."
Manufactured pretence with no genuine intent or practical benefits.

11. Structural governance issue: transmission network concentration

Entities such as:
Transgrid play dual roles:
project proponent
model input provider
cost estimator
system planner contributor

Rebuttal

This creates structural risks:
information asymmetry
self-reinforcing investment pipelines
no independent counter-modelling
no contestability of network solutions

12. National security and resilience omission

AEMO position

Security risks are considered indirectly through assumptions.

Rebuttal

There is no formal optimisation constraint for:
cyber-physical exposure

foreign supply chain dependency
critical infrastructure concentration risk
inverter-based systemic fragility

Core flaw

This is a critical missing optimisation dimension in a nationally significant infrastructure plan.

FINAL CONCLUSION

The Draft 2026 ISP Addendum presents a highly structured modelling process, but it does not demonstrate:

full transparency of pathway reduction logic
true neutrality between transmission and non-transmission solutions
inclusion of lifecycle emissions and supply chain impacts
robust system strength optimisation across competing technologies
integration of national security and resilience constraints
decision-level reproducibility of CDP selection outcomes

The framework produces manufactured outcomes that are ideologically consistent within a constrained model, but **not demonstrably optimal under real-world system, security, and lifecycle conditions.**