Transmission Reliability Standards

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on behalf of the Southern Group of Generators

Reliability Panel Public Forum, 30 April 2008

The Issues

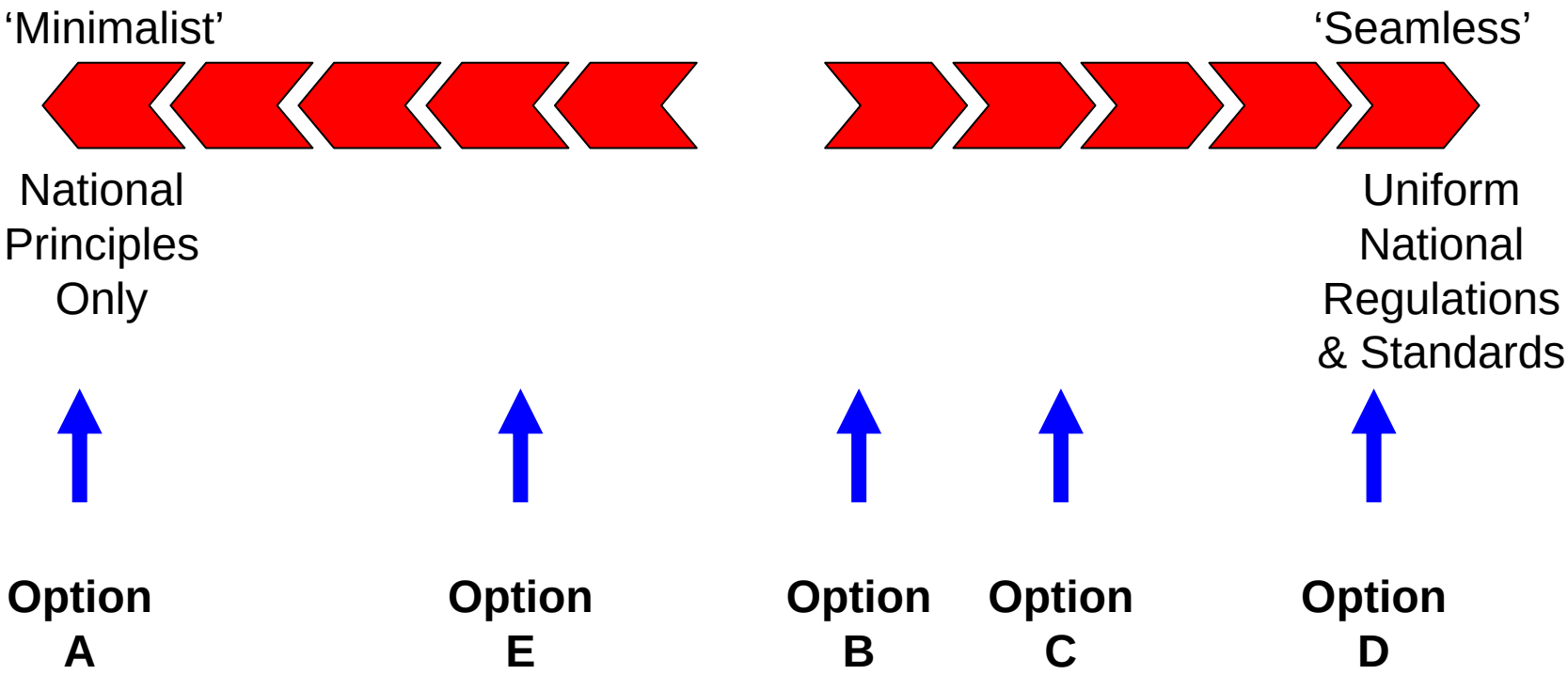
- What constitutes "a nationally consistent framework"?
- What are suitable high level principles to incorporate in the framework?
- What is an appropriate form of transmission reliability standard?

Nationally Consistent Framework

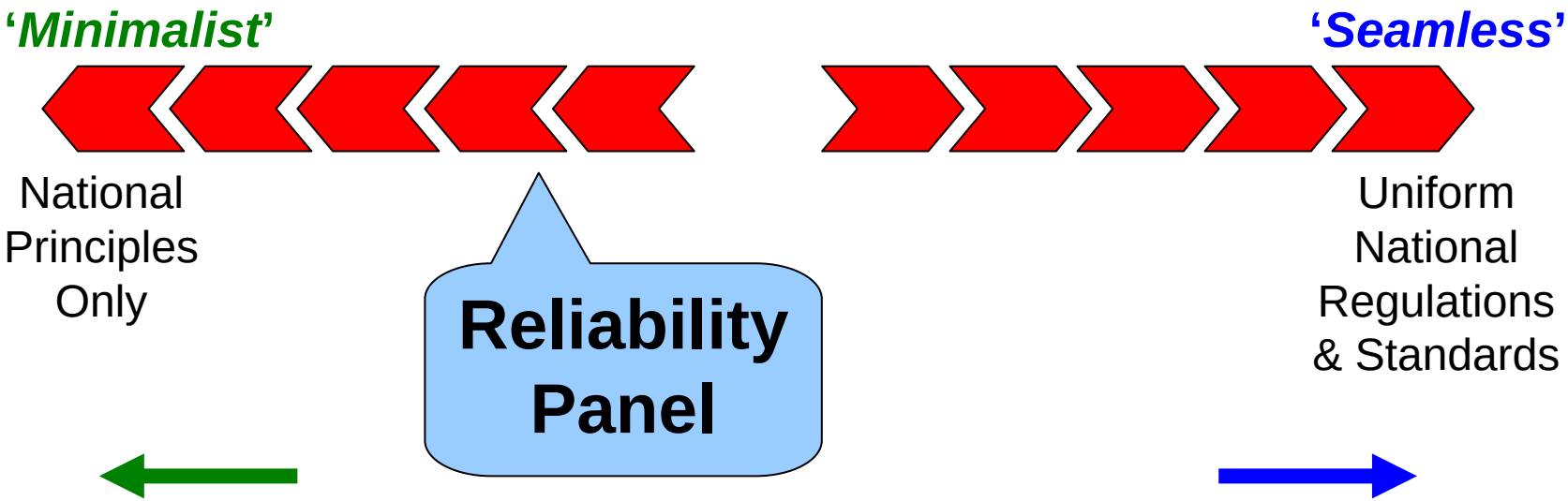
"... the creation of a truly national, efficient, sustainable and inclusive economy supported by seamless regulation ..." [1]

[1] "Australia 2020 Summit – Initial Summit Report", April 2008 – Page 10

Nationally Consistent Framework



Nationally Consistent Framework



TNSPs
States
ESIPC
Energy Australia

AER?

The Group
VENCorp
NGF

Nationally Consistent Framework

The stated case in favour of jurisdictional based standards:

- ***Each State is different***
- ***State politicians 'take the heat' for supply failures***
- ***Consistency between transmission and sub-transmission standards is 'important'***

These parochial arguments are unconvincing and are generally only offered by those who have little or no interest in participating in the market beyond the borders of their home State

Nationally Consistent Framework

Reliability Panel's concerns with jurisdictional standards:

- **Entrenches jurisdictional specific network planning**
- **Intra-jurisdictional TNSP planning focus**
- **Jurisdictional differences in the economics of transmission versus generation**

Nationally Consistent Framework

Jurisdictionally based standards =

- Lack of competitive neutrality between generation and transmission
- Needless complexity
- Needless retention of jurisdictional discretion
- Potential for undue influence and discretion for TNSPs
- Likely retention of simplistic deterministic standards

High Level Principles

Broad Consensus

- ✓ Transparency
- ✓ Governance
- ✓ Economic efficiency
- ✓ Specificity
- ✓ "Fit for Purpose"
- ✓ TNSP accountability

Other Suggestions

- ? Effectiveness (ETNOF)
- X Robustness (ETNOF)
- ? Consistency [c.f. Dist'n] (ETNOF / RP / The Group)
- X No worse (RP)
- ✓ Technology neutral (RP)

LOY YANG Marketing Management Company TRU energy AGL FLINDERS POWER International Power

Form of Reliability Standard

The 3 Options

- **Probabilistic**
- **Deterministic**
- **Hybrid**

Form of Reliability Standard

The Group strongly favours a probabilistic standard because it is:

- The only way to preserve competitive neutrality between various competing alternatives for meeting the standard
- Fully compatible with the NEM Objective and a proper value based investment test for new regulated investments
- The option that can best satisfy most, if not all, of the proposed principles

Form of Reliability Standard

The so-called 'deterministic' standard is anything but deterministic in that it is applied in a decision-making process involving planning futures that are inherently uncertain

In fact, as stated by VENCorp, a deterministic standard in this planning context is nothing more than a 'redundancy standard'

Form of Reliability Standard

Probabilistic based inputs into the application of a so-called deterministic standard include:

- **Demand forecasts (generally 90% POE)**
- **A range of 'typical' patterns of generation dispatch based on a number of 'plausible' future generation investment scenarios**
- **A range of plausible or credible system contingencies**

Form of Reliability Standard

Reliability Panel

- A set of deterministic standards based on economic considerations – i.e. a hybrid approach

The Group

- A probabilistic standard applied within a well-defined, uniform planning methodology
- Possible use of an economically based deterministic surrogate in limited, well-defined, circumstances – clearly specified in the uniform planning methodology – there could be many of these

Form of Reliability Standard

- **The theoretical correctness of the probabilistic approach is inarguable**
- **It's detractors criticise it on the grounds of:**
  - **Complexity**
  - **Practicality**
  - **Clarity in investment decision-making**
  - **Stakeholder Acceptance**
- **That is, it's an inconvenience, principally to TNSPs**

Form of Reliability Standard

The RP's case against a probabilistic standard:

- "… few power systems in advanced economies are developed in this way"
- "… adoption of such an approach across the NEM would present many challenges"
- "… may be desirable for there to be a consistent relationship between transmission and sub-transmission standards"
- "A very compelling case would have to be made to governments and regulators to switch to probabilistic standards and planning methods …"

Form of Reliability Standard

The Group's position:

- The probabilistic approach is theoretically correct
- It's advantages (in terms of satisfying the proposed principles) compared to the alternatives are significant
- The arguments against it are unconvincing
- VENCorp has demonstrated that it's doable, but we acknowledge their approach falls well short of an ideal probabilistic planning methodology
- Needlessly settling for a "second best" approach simply because it's convenient is likely to be very costly in the long run