

Development of the SRC's risk management framework

Seeking the SRC's feedback on four draft bowties

28 March 2017

Note: This paper has been prepared for the purpose of discussion.
Content should not be interpreted as representing the views or policy of
the Electricity Authority.

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1 Introduction

1.1 The purpose of this paper is to obtain feedback on the developed content of the bowtie model

1.1.1 This paper sets out:

- a) an overview of the structure of the parts of the bowtie model that have been developed so far by the SRC's secretariat
- b) the content for a sub-set of that structure, for which the secretariat is seeking the SRC's feedback.

1.1.2 Specifically, the secretariat is seeking the SRC's feedback on the following content:

- a) the top level bowtie (left-hand side only)
- b) the energy shortage sub-bowtie
- c) the capacity shortage sub-bowtie
- d) the unavailable distribution sub-bowtie (a tertiary sub-bowtie that is the child of the capacity shortage sub-bowtie).

1.2 This paper builds on previous papers, workshop and discussions

1.2.1 The RMF development has been described in past papers to the SRC and in discussions during SRC meetings. The SRC has discussed this topic at its meetings on 1 July 2015¹, 22 October 2015², 15 March 2016³, 21 June 2016⁴ and 19 October 2016.⁵

1.2.2 The SRC wants the RMF to create these key outcomes:

- a) improve the visibility of risks that are not widely known
- b) improve the understanding of risks (and their interactions) that are not well understood
- c) identify any gaps or overlaps between the responsibilities of risk owners
- d) stimulate valuable risk insight and actions within the electricity industry.

1.3 Progress made since the October 2016 SRC meeting

1.3.1 The draft bowtie structure presented at the 19 October 2016 SRC meeting is largely unchanged. It is still a cascading model with one top level bowtie that branches out into several secondary and tertiary sub-bowties.

1.3.2 The left-hand side (the scenario side) of the model has been populated and the scenarios leading to the main event have been grouped into three secondary bowties:

- a) energy shortage
- b) capacity shortage

¹ <http://www.ea.govt.nz/dmsdocument/19900>

² <http://www.ea.govt.nz/dmsdocument/20052>

³ <http://www.ea.govt.nz/dmsdocument/20853>

⁴ <http://www.ea.govt.nz/dmsdocument/20858>

⁵ <http://www.ea.govt.nz/dmsdocument/21428>

c) system failure.

1.3.3 The left-hand side of the model has been workshopped with wide range of subject-matter experts within the Authority.

1.3.4 While the secretariat has developed the content for the system failure sub-bowtie, SRC feedback is not yet sought on that content. The secretariat considers that would be too much content to expect the SRC to provide detailed feedback on in a single meeting.

1.4 Future development of the model

1.4.1 The secretariat will incorporate the SRC's feedback from the 28 March 2017 meeting.

1.4.2 The secretariat will run separate workshops with up to three industry participants to seek their feedback on the left-hand side of the model. The secretariat would like to meet with two to four experienced people in each of these participants. Ideally, these people will have deep experience in the industry and represent a range of disciplines (such as risk management, engineering, operations). SRC members that are willing to volunteer their organisations for such a workshop should make themselves known to the secretariat.

1.4.3 An issue that the SRC might want accommodated in future versions of the model relates to changes that distributors could make to their live line operating practices. The secretariat expects to report to the 7 July 2017 SRC meeting on that topic; this is likely to enable an assessment of this matter as a possible scenario.

1.4.4 The right-hand side of the model will define the consequences incurred after a 'top event' (an unplanned outage > \$10M) occurs. Development of the right-hand side of the model will begin in the second half of 2017 and will follow a similar development process as the left-hand side.

1.4.5 Once the full breadth of the model has initially been developed, the secretariat will ask the SRC to consider whether there is merit making the model go broader and deeper. For example:

- a) extending the model to include *indirect* causes. The left-hand side currently terminates with the *direct* causes of the top event as the scenarios. Other bowtie models often extend further 'to the left' displaying *indirect* causes of the *direct* causes and any related controls
- b) assessing the likelihood of scenarios and the effectiveness of controls.

2 Terminology of the bowtie structure

2.1 Understanding the terminology adopted in these bowties

2.1.1 The terminology used in these bowties is explained in Table 1 below.

Table 1: How elements of the SRC's bowties are named and colour coded

Term	Colour code	Meaning
Scenario	Purple	These represent the identified hazards that could cause the top event to occur. Also known as 'threats' or 'direct causes' in other bowtie models. The scenario is always at the far left of each figure.
Scenario hub	Dark blue	Scenario hubs link parent and child bowties. In practice, they are a collection of similar scenarios where the same sorts of controls apply.
Control	Light blue	Controls are placed in between scenarios or category hubs and the top event. They describe steps that can be taken pre-emptively or responsively to scenario occurrences to prevent the top event from occurring. Controls are grouped by control owner and their place on the diagram indicates how many scenarios that control will apply to. A control applies to all the scenarios on threads that lead to that control
Group control	Orange	These are blanket controls that modify the likelihood of all scenarios.
Top event	Red	This is the undesirable event that can be found at the centre of any bowtie. It represents the moment at which the situation has gotten out of control.

2.1.2 Each control also has a control owner. The control owner is the organisation or group responsible for maintaining or implementing the control. The control owner is not necessarily the entity affected by the control. For example, the Authority is the control owner for the customer compensation scheme but retailers are the entities directly affected.

2.1.3 The position of each control on the bowties is primarily driven by ensuring that each control applies to all 'upstream' scenarios. Where one or more controls are located in the same position relative to scenarios, the order in which they appear is usually chronological.

2.1.4 Each element in these bowties has been given a reference identifier. Because it is impractical to include all commentary on the bowties themselves, reference identifiers help readers find any more detailed comments about an element of the bowtie.

3 Overview of the bowtie structure

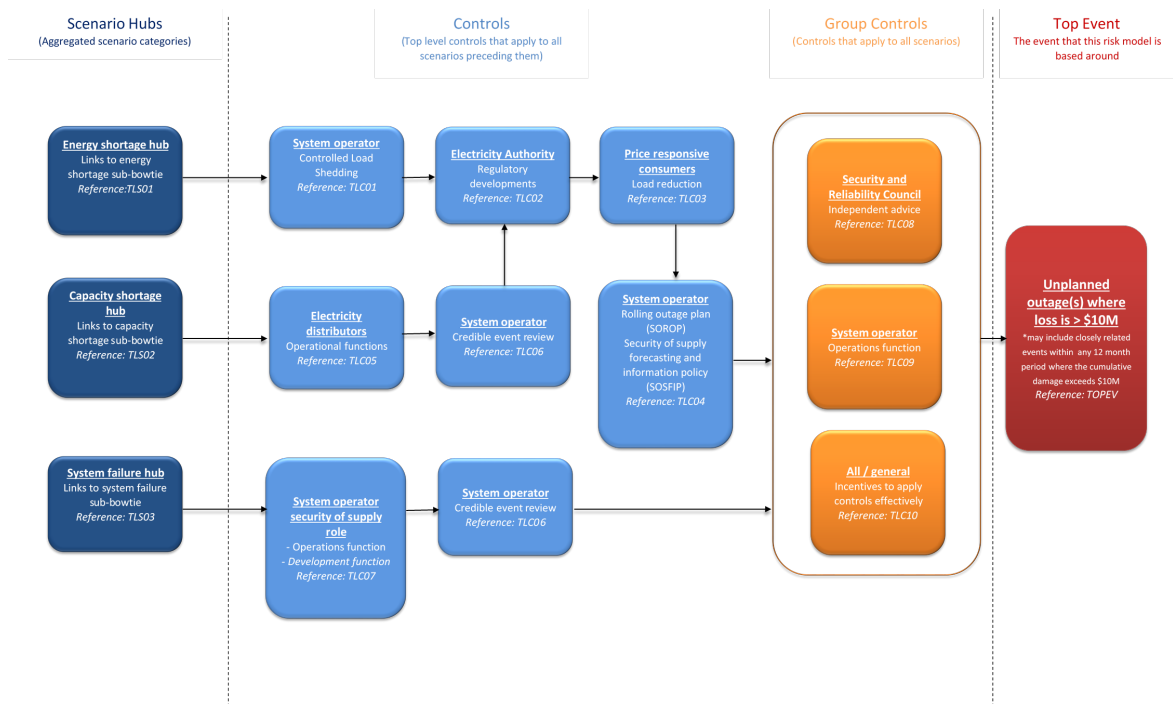
3.1.1 The following bowtie overviews are not intended to provide legible bowties for review. The purpose of this section is to orient SRC members with the structure before delving into detail in section 4 of this paper.

3.2 Overview of the top level bowtie (left-hand side only)

3.2.1 The below diagram is a miniature version of reference figure 1 in the appendix.

- 3.2.2 The top level bowtie is the central nexus in the model. It contains the top event and all sub-bowties extend outwards from it.
- 3.2.3 The top event has been defined as an unplanned outage of economic damage exceeding NZD \$10 million. This is discussed in more detail in paragraphs 4.2.1, as that is the section for which SRC feedback is sought.
- 3.2.4 The light blue controls in this bowtie are controls for all scenarios in sub-bowties that are connected 'upstream' of them via the energy shortage, capacity shortage and system failure scenario hubs. The orange group controls are controls for all scenarios.
- 3.2.5 A single asset failure could manifest in all three scenario hubs. For example, if a hydro generation storage dam fails catastrophically:
- a) the immediate loss of associated generation would be covered by the controls in the system failure sub-bowtie
 - b) consequential destruction of transmission or distribution lines would also be covered by the controls in the system failure sub-bowtie
 - c) the subsequent unavailability of generation or transmission capacity would be covered by the controls in the capacity shortage sub-bowtie
 - d) the subsequent reduction of hydro storage would be covered by the controls in the energy shortage sub-bowtie.
- 3.2.6 Similarly, reduced generation supply relative could manifest in both the energy shortage and capacity shortage scenario hubs.
- 3.2.7 Figure 1 is only the left-hand side of the top level bowtie. In the final version there will also be a similarly structured right-hand side describing potential consequences of the top event and the controls intended to reduce the impact of these consequences.

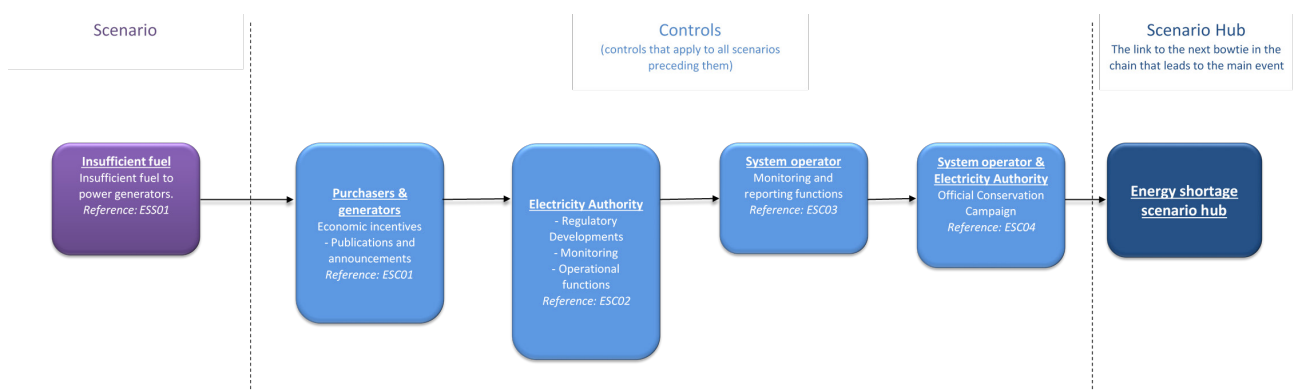
Figure 1: Top level bowtie, left-hand side only (miniature version)



3.3 Overview of the energy shortage sub-bowtie

- 3.3.1 The energy shortage sub-bowtie links directly to the top level bowtie through the energy shortage scenario hub.
- 3.3.2 Energy shortage refers to the scenario associated with using generation fuels faster than they are replenished. If such a situation persists, it will eventually manifest as real time imbalances between supply and demand. This is analogous to a household that spends more than it earns: the timing of its manifestation as a problem is strongly related to the size of the buffer, and the consequences are almost always severe.

Figure 2: Energy shortage sub-bowtie (miniature version)



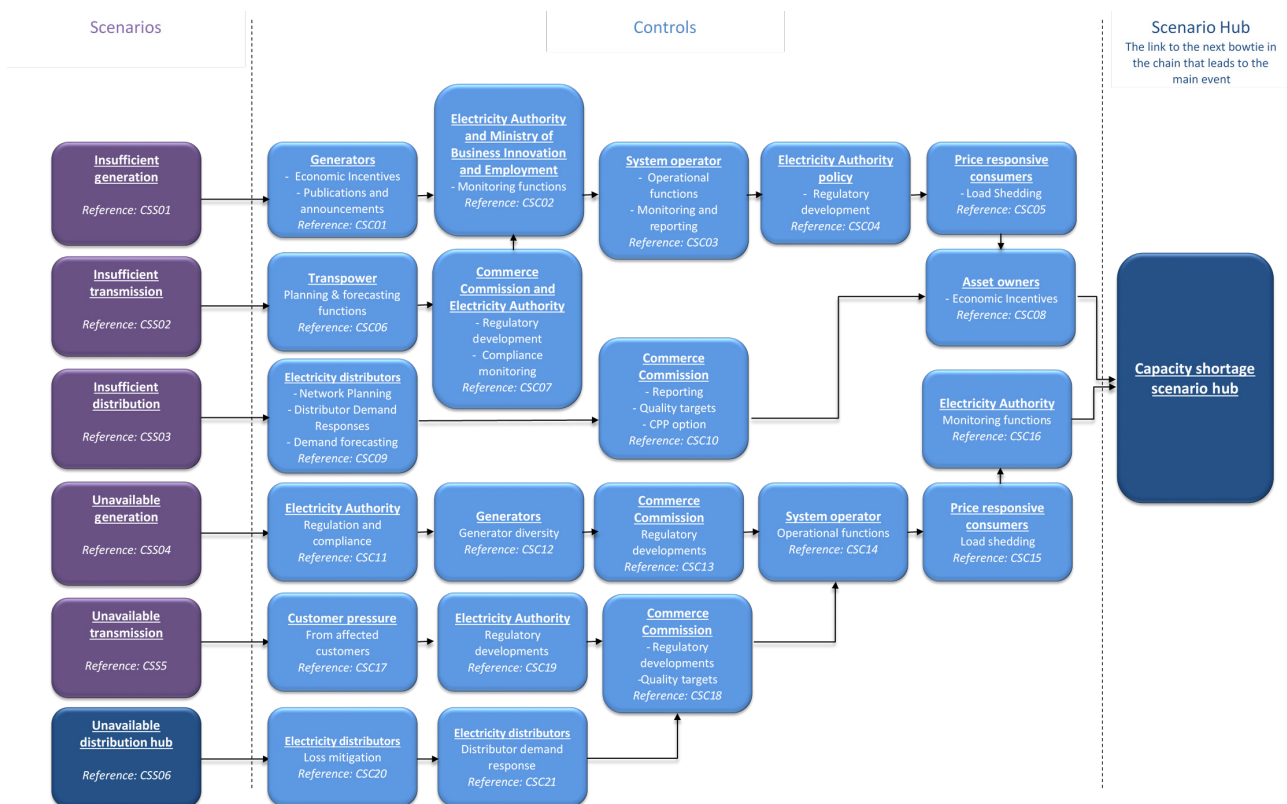
- 3.3.3 The only scenario currently in this bowtie is 'Insufficient fuel' (reference ESS01 in the appendix) which has four controls in place to minimise the likelihood of the scenario triggering the top event.

- 3.3.4 Earlier versions of this sub-bowtie used separate scenarios for certain types of fuel shortages (such as water). As there was no difference in the controls applied, these were merged into a single scenario. If feedback identifies at least one control that is specific to some sub-set of fuel type, then the sub-bowtie could be modified to accommodate this.

3.4 Overview of the capacity shortage sub-bowtie

- 3.4.1 The capacity shortage sub-bowtie links directly to the top level bowtie through the capacity shortage scenario hub.
- 3.4.2 Capacity shortage refers to the scenarios associated with a real-time shortfall of supply relative to actual demand. It excludes matters relating to energy shortage (whether sufficient fuel is available), though as noted in paragraphs 3.2.5 and 3.2.6, there can be events to which both sub-bowties apply.

Figure 3: Capacity shortage sub-bowtie (miniature version)



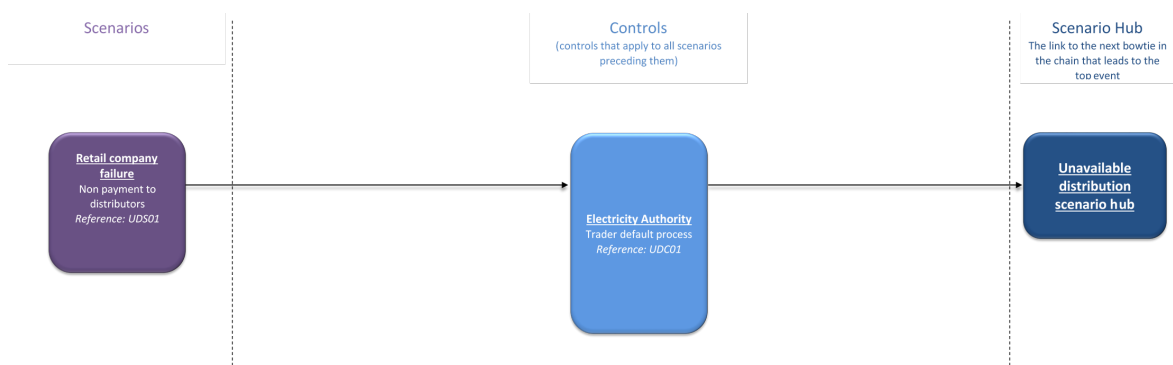
- 3.4.3 This sub-bowtie distinguishes between two types of capacity shortage: insufficiency and unavailability.
- Insufficient capacity means that not enough supply capacity exists. In other words, not enough capacity has been built compared with demand.
 - Unavailable capacity means that enough capacity exists, but that too much of it is unavailable to consumers for whatever reason.
- 3.4.4 This sub-bowtie distinguishes between three forms of capacity: generation, transmission and distribution.

- 3.4.5 The two types of shortage (insufficiency and unavailability) multiplied by the three forms of capacity (generation, transmission and distribution) gives this sub-bowtie six scenarios.
- 3.4.6 One of these six scenarios (the 'unavailable distribution' scenario) is actually a scenario hub as the secretariat identified a significant control upstream of the scenario. This links to a tertiary sub-bowtie shown below in Figure 4.

3.5 Overview of the unavailable distribution tertiary sub-bowtie

- 3.5.1 The 'Unavailable distribution' sub-bowtie refers to a scenario where a distribution company makes all or some of their network unavailable to consumers. While this occurs in the case of individual consumers, the secretariat is unaware of any historic precedent for this where the economic impact would exceed \$10 million (thereby being in scope of the SRC's risk management framework). As such, this seems to be the least credible scenario in the bowtie model.

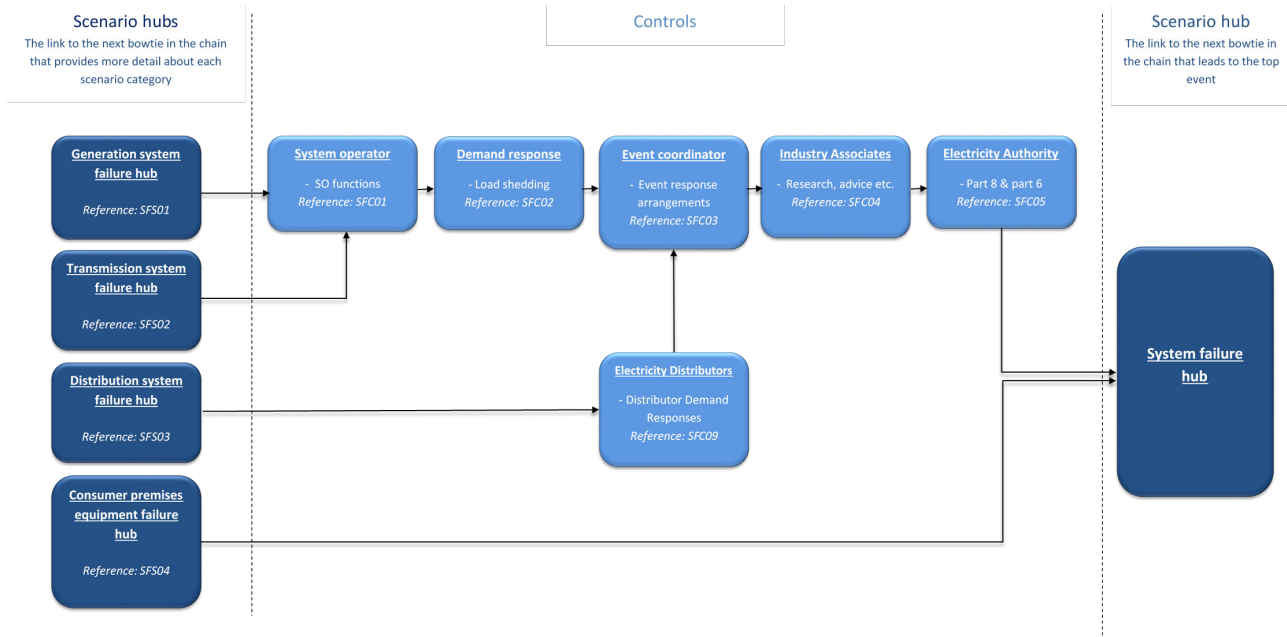
Figure 4: Unavailable distribution sub-bowtie (miniature version)



- 3.5.2 The only scenario identified in this sub-bowtie is 'Retail company failure' which describes the event where a retail company goes into liquidation, fails to pay the distributor and the distributor might choose to disconnect customers.
- 3.5.3 The control that modifies the likelihood of this scenario leading to an 'unavailable distribution' scenario is the Authority's trader default process (Reference UDC01).

3.6 Overview of the system failure sub-bowtie

- 3.6.1 This overview of the 'system failure' sub-bowtie is provided only to help the SRC understand what is excluded from the scope of the 'energy shortage' and 'capacity shortage' sub-bowties. There is no full-size version of this sub-bowtie in the following section as the system failure sub-bowtie will be presented at a later SRC meeting.

Figure 5: System failure sub-bowtie (miniature)

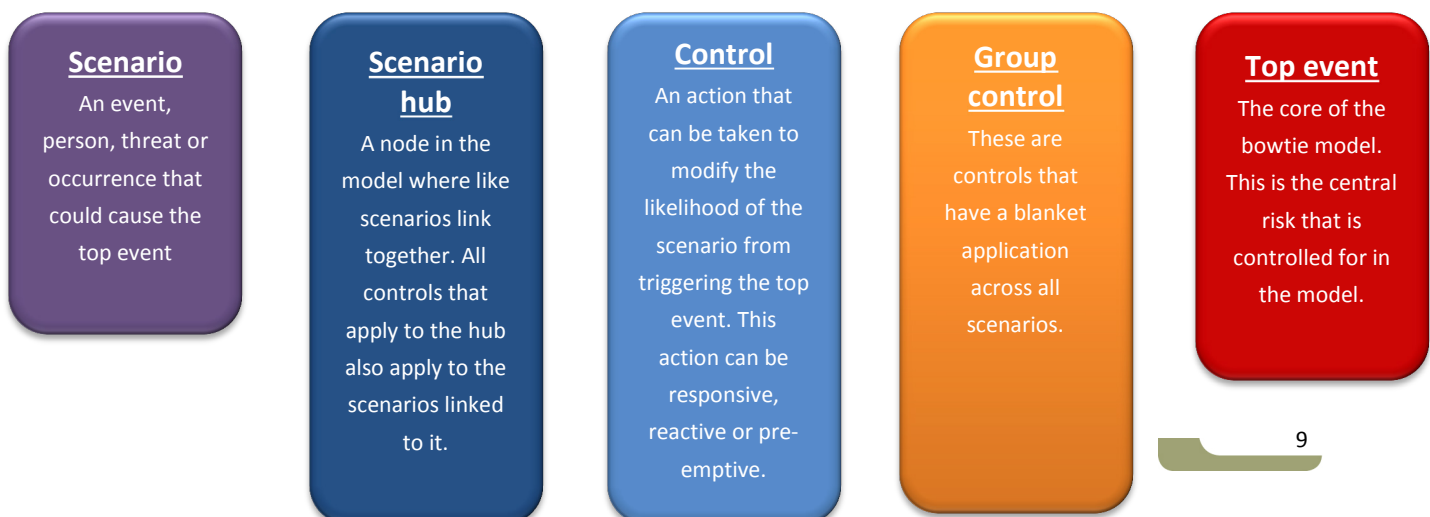
3.6.2 This sub-bowtie has four scenarios relating to a failure of generation, transmission, distribution and customer premise equipment. Each of these scenarios is actually a scenario hub, though the content of those sub-bowties has not yet been well developed. The secretariat expects those sub-bowties will include the indirect causes such as:

- asset failure
- physical attack
- cyber attack
- natural disaster
- process failure
- human error/factor.

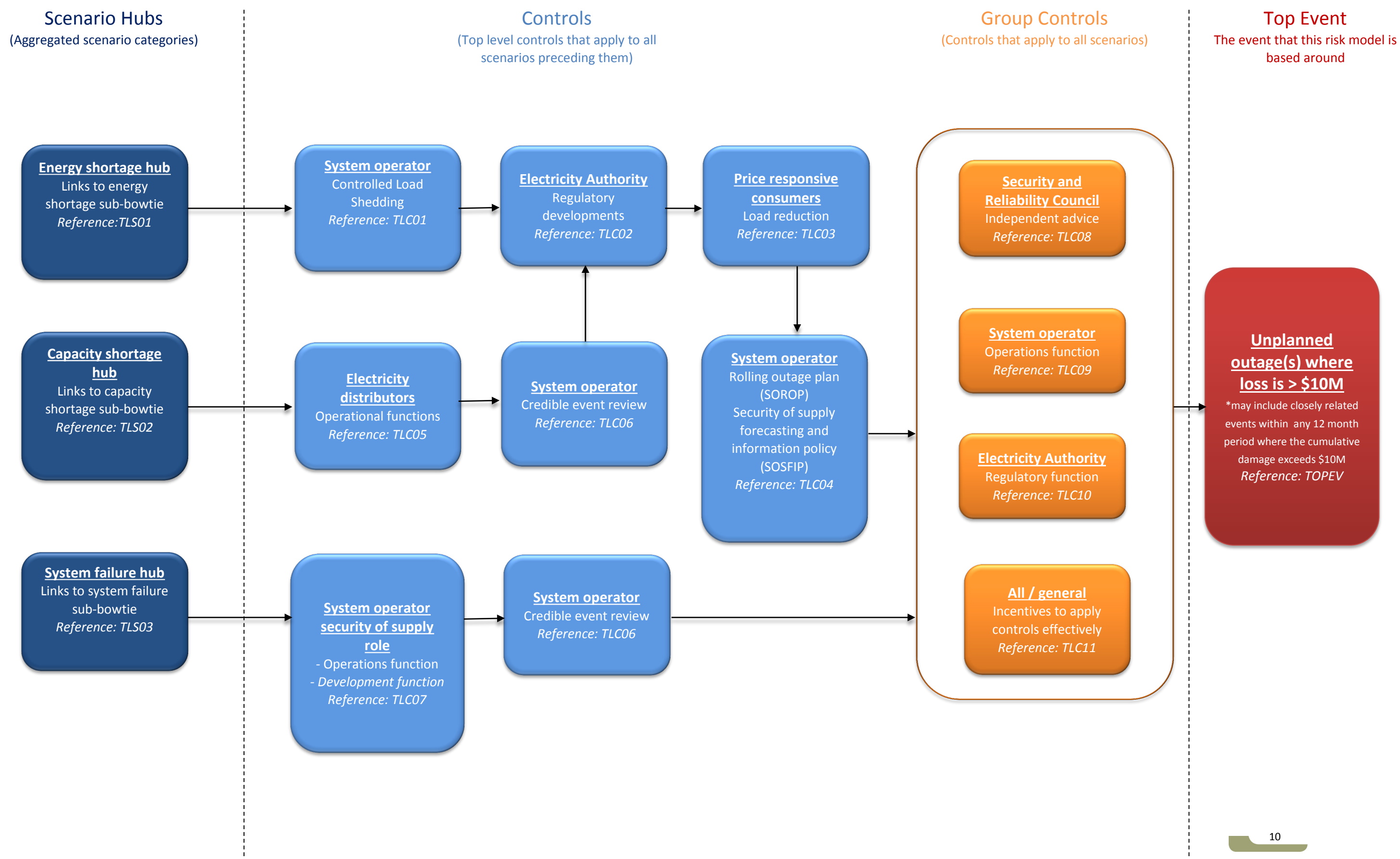
4 Bowties for SRC feedback

4.1.1 The material in this section is the content that the SRC's feedback is sought on.

4.1.2 Figure 6 below illustrates the different elements of the bowties presented in this section.

Figure 6: Key illustrating the five elements in the bowtie model

Reference figure 1, top level bowtie (left-hand side only)



4.2 Top level bowtie: The top event

4.2.1 Reference TOPEV: The top event

- a) The 16 October 2016 SRC paper describing the risk management framework defined the top event as “security, reliability and quality of supply events that have consequences greater than an economic loss of \$10m and the potential to cause loss of life.”
- b) By contrast, the secretariat now proposes that the top event be refined to be “Unplanned outage(s) where loss exceeds \$10 million.” The key points about this formulation of the top event are:
 - i) that it is shorter and easier to understand
 - ii) just about any outage has the *potential* to cause loss of life, so this was not a functional filter for the scope of the bowtie model
 - iii) loss of life, where figures are available, *could* be included against the \$10 million threshold
 - iv) quality of supply events have a different set of controls so should be the subject of a separate bowtie model if the magnitude of the risk warrants it
 - v) the definition now has a footnote that it “may include closely related events within any 12 month period where the cumulative damage exceeds \$10M” as this reflects the SRC’s earlier intent that related events should be considered in scope where the impact on consumers still exceeded the threshold.

4.3 Top level bowtie: Scenario hubs

4.3.1 Reference TLS01 : Energy shortage scenario hub

- a) The node that links to the energy shortage sub-bowtie. All controls that apply to this hub therefore also apply to all scenarios in the linked sub-bowties.

4.3.2 Reference TLS02 : Capacity shortage scenario hub

- a) The node that links to the capacity shortage sub-bowtie. All controls that apply to this hub therefore also apply to all scenarios in the linked sub-bowties.

4.3.3 Reference TLS03 : System failure scenario hub

- a) The node that links to the system failure sub-bowtie. All controls that apply to this hub therefore also apply to all scenarios in the linked sub-bowties.

4.4 Top level bowtie: Controls

4.4.1 Reference TLC01 : System operator

- a) Operational functions:
 - i) controlled load shedding for security purposes, coordination with distribution networks to reduce load.

4.4.2 Reference TLC02 : Electricity Authority

- a) Regulatory developments:
 - i) security of supply policy including security margins and stress testing.

- ii) specifies the system operator's security of supply functions and how they are to be performed and reported on.

4.4.3 Reference TLC03 : Price responsive consumers

- a) Voluntary load reduction in response to economic incentives.

4.4.4 Reference TLC04 : System operator

- a) Security of supply functions:
 - i) System Operator Rolling Outage Plan (SOROP)
 - ii) approval of Participant Rolling Outage Plans (PROPs) provides improved management of national or regional conservation efforts as rolling outage sequences are pre-planned
 - iii) security of supply forecasting and information policy (SOSFIP), including extra information and communications to assist consumers during conservation period.

4.4.5 Reference TLC05 : Electricity distributors

- a) Operational functions:
 - i) contingency planning. For example, network switching and interconnection plan to provide an alternative to damaged sub-transmission.
 - ii) incident management planning.

4.4.6 Reference TLC06 : System operator

- a) Performing (at least) five-yearly reviews of credible events on the power system. This review defines the risks that will be avoided, mitigated or accepted. The Authority has an approval role with this.

4.4.7 Reference TLC07 : System operator

- a) Operations function:
 - i) prepare and regularly review the system security forecast (clause 8.15 of the Code)
- b) Development function:
 - i) development and implementation of extended reserves. Introducing an economic merit order for feeder arming results in a lower economic cost of an extended reserves event.

4.4.8 Reference TLC08 : Security and Reliability Council

- a) The Security and Reliability Council provides independent advice to the Authority on the performance of the electricity system, the performance of the system operator, and reliability of supply issues.

4.4.9 Reference TLC09 : System operator⁶

⁶ Note that the Authority approves or declines any EMP or policy statement that the system operator puts forward, so this could be argued to be a joint ownership

- a) Operations function:
 - i) policies that support system operations are the emergency management policy (EMP) and the Policy Statement

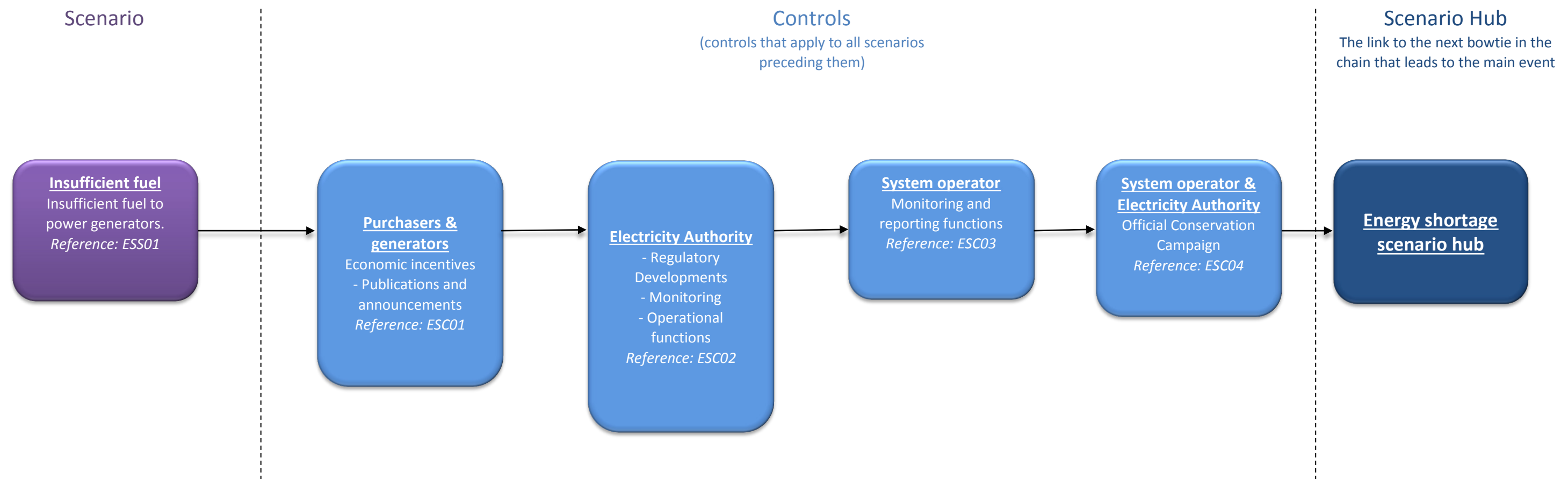
4.4.10 Reference TLC10 : Electricity Authority

- a) Regulatory function:
 - i) The Authority statutory objective requires it to “promote competition in, reliable supply by, and the efficient operation of, the electricity industry for the long-term benefit of consumers” and has been empowered to pursue this objective. This control reflects the Authority’s general regulatory powers and its ability to regulate at any time where that would promote the statutory objective.

4.4.11 Reference TLC11 : All / general

- a) Managing public relations. Avoiding adverse reactions such as Ministerial responses, media and public scrutiny. Promoting community and political support for activities.
 - i) This does not control anything specifically, but acts as an incentive for control owners to create and apply controls thoroughly and effectively across everything they do.

Reference figure 2, energy shortage sub-bowtie



4.5 Energy shortage sub-bowtie: Scenario

4.5.1 Reference ESS01 : Insufficient fuel

- a) Insufficient fuel (water or otherwise) to power generators.

4.6 Energy shortage sub-bowtie: Controls

4.6.1 Reference ESC01 : Purchasers & generators

- a) Economic incentives:
 - i) wholesale market incentives (nodal pricing, futures market, hedge market, FTR market, demand response)
 - ii) customer compensation scheme – which creates incentives for retailers to contractually prepare for dry years
- b) Market announcements and publications. For example: Genesis Energy announcing its intentions for the Huntly Rankine units; Meridian Energy publishing snowpack information.

4.6.2 Reference ESC02 : Electricity Authority

- a) Regulatory developments:
 - i) customer compensation scheme (CCS)
- b) Monitoring functions:
 - i) enquiries
 - ii) publishing historic hydro risk curves
 - iii) maintaining the hydrological modelling dataset
 - iv) publishing a hydro-thermal scheduling model (Dynamic Outer Approximation Sampling Algorithm, DOASA)
- c) Operational functions:
 - i) Reserve Supply Determination. The Authority publishes the standing reserve supply determination to ensure continued access to hydro lakes at a trigger point that reflects the original expectations of the consenting authorities.

4.6.3 Reference ESC03 : System operator

- a) Monitoring and reporting functions:
 - i) annual assessment of security of supply
 - ii) hydro risk curves
 - iii) risk meter.

4.6.4 Reference ESC04 : System operator and Electricity Authority

- a) Official conservation campaign (OCC). This has joint ownership as the Authority is the regulatory author but the system operator is the lead agency for implementation. This control will also:
 - i) appear on the right-hand side of the bowtie model as it modifies the impact of the top event

- ii) have its own dedicated sub-bowtie to highlight the consequences arising from the OCC.

Reference figure 3, capacity shortage sub bowtie



4.7 Capacity shortage sub-bowtie: Scenarios

4.7.1 Reference CSS01 : Insufficient Generation

- a) This represents a situation where, relative to demand, not enough generation capacity exists.

4.7.2 Reference CSS02 : Insufficient Transmission

- a) This represents a situation where, relative to transmission needs, not enough transmission capacity exists.

4.7.3 Reference CSS03 : Insufficient Distribution

- a) This represents a situation where, relative to distribution needs, not enough distribution capacity exists.

4.7.4 Reference CSS04 : Unavailable Generation

- a) This represents a situation where, relative to generation needs and despite it actually existing, not enough generation capacity is being offered into the market.

4.7.5 Reference CSS05 : Unavailable Transmission

- a) This represents a situation where, relative to transmission needs and despite it actually existing, not enough transmission capacity is being modelled as available by the grid owner.

4.7.6 Reference CSS06 : Unavailable Distribution

- a) This represents a situation where enough distribution is being with-held to create a \$10 million loss to consumers.

4.8 Capacity shortage sub-bowtie: Controls

4.8.1 Reference CSC01 : Generators

- a) Economic incentives:
 - i) market instruments (spot prices, hedge & futures prices, pricing constraints, scarcity pricing and associated cumulative price threshold, demand response)
- b) Market announcements and publications
 - i) continuous disclosure obligations
 - ii) accurate reporting by generators of their outages in Planned Outage Coordination Process (POCP)
- c) Demand forecasting.

4.8.2 Reference CSC02 : Electricity Authority and Ministry of Business Innovation and Employment

- a) Monitoring functions:
 - i) Publishing Generation Expansion Model (Authority)
 - ii) Publishing Energy Datafile (MBIE).

4.8.3 Reference CSC03 : System operator

- a) Operational functions:

- i) controlled load shedding
- b) Monitoring and reporting:
 - i) System Security Forecast (SSF)
 - ii) Annual Assessment of Security of Supply
 - iii) New Zealand Generation Balance (NZGB).

4.8.4 Reference CSC04 : Electricity Authority

- a) Regulatory developments:
 - i) Part 8 of the Code, which relates to common quality. In particular, Part 8 sets out the performance obligations of asset owners, arrangements concerning ancillary services, a process for procuring extended reserve, and technical codes.

4.8.5 Reference CSC05 : Price responsive consumers

- a) Voluntary load shedding in response to economic incentives.

4.8.6 Reference CSC06 : Transpower

- a) Planning and forecasting functions:
 - i) *Transmission Tomorrow* and various other asset management documents
 - ii) demand forecasting
 - iii) planning transmission, including transmission alternatives (such as demand response).

4.8.7 Reference CSC07 : Commerce Commission & Electricity Authority

- a) Regulatory developments:
 - i) grid reliability standards (Authority)
 - ii) estimating the value of lost load (Authority)
 - iii) requirements for “good electricity industry practice” (Authority)
 - iv) regulatory approval for specific investments (Commission)
 - v) setting revenue cap (Commission)
 - vi) Asset Management Plan reviews (Commission)
- b) Compliance monitoring:
 - i) quality targets (SAIDI and SAIFI).

4.8.8 Reference CSC08 : Asset owners (generators, grid owner, distributors)

- a) Economic incentives:
 - i) efficient use of capital
 - ii) efficient utilisation of equipment.

4.8.9 Reference CSC09 : Electricity distributors

- a) Network planning:

- i) set network planning criteria for their individual networks. Network planning criteria generally define the level of redundancy (such as N-1) that is provided for different load groups
- b) Demand forecasting
- c) Distributors' demand response:
 - i) voluntary load shedding in response to distributor's price signals (such as The Lines Company's Time Of Use pricing or Orion's controlled peak period)
 - ii) controlled load shedding for economic or network security purposes (such as ripple control).

4.8.10 Reference CSC10 : Commerce Commission

- a) Requirements for asset management plans and information disclosures
- b) Quality targets (SAIDI and SAIFI)
- c) Option for customised price path (CPP).

4.8.11 Reference CSC11 : Electricity Authority

- a) Regulatory developments:
 - i) an uncapped market means generators can set the price at which they are willing to be dispatched
 - ii) requiring a 'high standard of trading conduct' (clause 13.5a of the Code)
 - iii) arrangements that give confidence that generators will be paid for electricity produced (prudentials, trader default process)
 - iv) scarcity pricing helps prevent price collapse during periods of scarcity
- b) Compliance monitoring:
 - i) investigating breach allegations, such as complaints of poor trading conduct.

4.8.12 Reference CSC12: Generators

- a) The current mix of generation types is fairly diverse, and this provides some protection against a common mode failure affecting capacity.

4.8.13 Reference CSC13 : Commerce Commission

- a) Regulatory developments:
 - i) anti-collusion legislation preventing generators manufacturing shortages
 - ii) approval of significant mergers and acquisitions to prevent market dominance

4.8.14 Reference CSC14 : System operator

- a) Operational functions:
 - i) controlled load shedding for security purposes (such as coordination with distribution networks to reduce load)

4.8.15 Reference CSC15 : Price responsive consumers

- a) Voluntary load shedding in response to economic incentives.

4.8.16 Reference CSC16 : Electricity Authority

- a) Monitoring functions:
 - i) market enquiries, referral of issues to advisory groups
- b) Compliance monitoring
 - i) breach allegations.

4.8.17 Reference CSC17 : Customer pressure

- a) Affected customers voicing concerns (social media, media coverage, protests and lobbying of Board).

4.8.18 Reference CSC18 : Electricity Authority

- a) Regulatory developments:
 - i) Part 12 of the Code (such as grid reliability standards, core grid determination, grid reliability reporting).

4.8.19 Reference CSC19 : Commerce Commission

- a) Regulatory developments
 - i) quality targets (SAIDI and SAIFI).

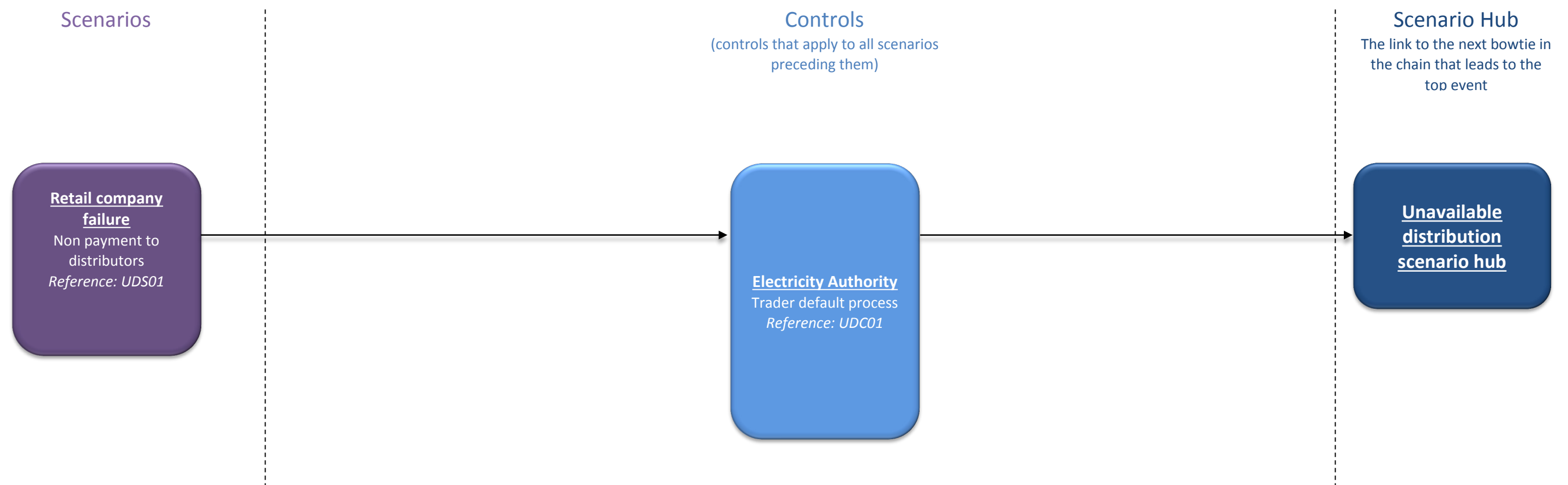
4.8.20 Reference CSC20 : Electricity distributors

- a) Taking steps to mitigate losses in the event of a default
 - i) planning for disconnection
 - ii) communications plan
 - iii) prudential requirements.

4.8.21 Reference CSC21 : Electricity distributors

- a) Distributors' demand response:
 - i) voluntary load shedding in response to distributor's price signals (such as The Lines Company's pricing or Orion's controlled peak period)
 - ii) controlled load shedding for economic or network security purposes (such as ripple control).

Reference figure 4, unavailable distribution sub-bowtie



4.9 Unavailable distribution sub-bowtie

4.9.1 Reference UDS01 : Retail company failure

- a) If a retail company fails to pay its bills from a distributor, the distributor's last resort is the possibility of disconnecting consumers.

4.9.2 Reference UDC01 : Electricity Authority

- a) Trader Default Process. The arrangements for managing a trader default situation are contained in Part 11 and Part 14 of the Code. A trader defaulting on their payments to a distributor can be a trigger to this process. The existence of this control modifies the likelihood of a trader preferring to default on their distributor payments versus the clearing manager.

5 Questions for the SRC to consider

5.1.1 The SRC may wish to consider the following questions.

- | | |
|------------|--|
| Q1. | What feedback, if any, does the SRC have on the top level bowtie? |
| Q2. | What feedback, if any, does the SRC have on the energy shortage sub-bowtie? |
| Q3. | What feedback, if any, does the SRC have on the capacity shortage sub-bowtie and the unavailable distribution sub-bowtie? |
| Q4. | To what extent did the SRC find this paper to be an effective tool for eliciting the SRC's feedback? Was the level of detail provided appropriate? |
| Q5. | What further information, if any, does the SRC wish to have provided to it by the secretariat? |
| Q6. | What advice, if any, does the SRC wish to provide to the Authority? |