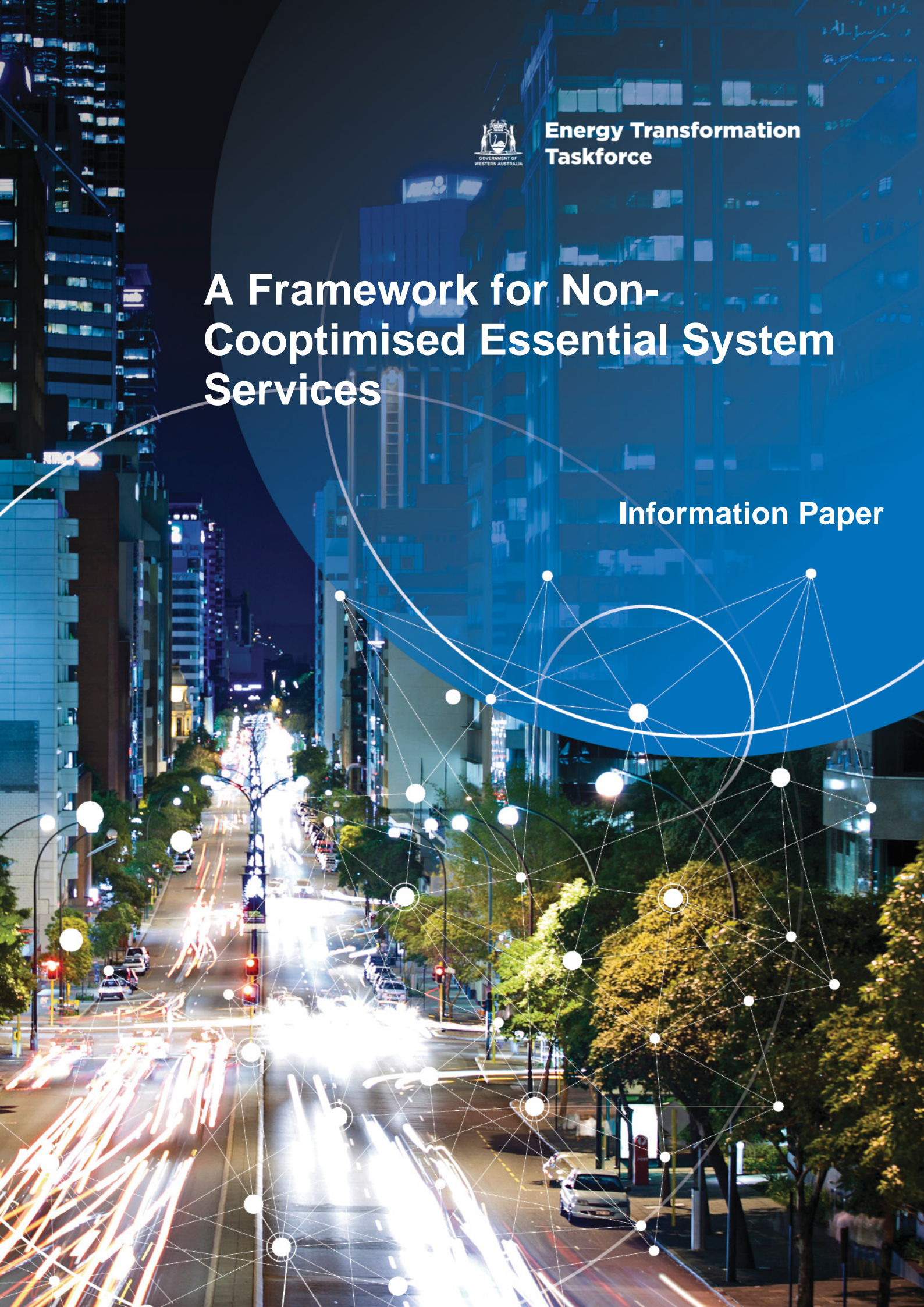




**Energy Transformation
Taskforce**

A Framework for Non- Cooptimised Essential System Services

Information Paper



An appropriate citation for this paper is: A Framework for Non- Cooptimised Essential System Services

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1. Purpose of this project

1.1 The Energy Transformation Strategy

This paper forms a part of the work to deliver the Energy Transformation Strategy, which is the Western Australian Government's response to the energy transformation underway and its plan for the State's future power system. The delivery of the Energy Transformation Strategy is being overseen by the Energy Transformation Taskforce (the Taskforce), established on 20 May 2019. The Taskforce is supported by the Energy Transformation Implementation Unit (ETIU) – a dedicated unit within Energy Policy WA, itself a part of the Department of Mines, Industry Regulation and Safety.

More information on the Energy Transformation Strategy, the Taskforce and ETIU can be found on the Energy Policy WA website at www.energy.wa.gov.au.

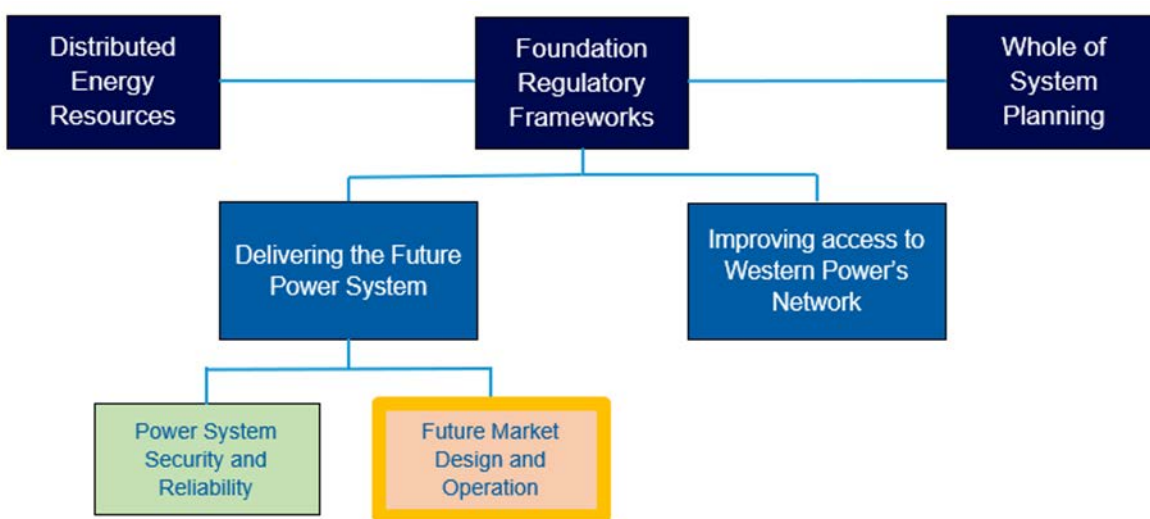


Figure 1 Energy Transformation Strategy work streams

The Non-Cooptimised Essential System Services (NCESS) framework has been developed as part of the Future Market Design and Operations work stream of the Delivering the Future Power System part of the Foundation Regulatory Frameworks.

1.2 Purpose of this paper

This paper outlines the need for Essential System Services, other than frequency control services, to address emerging power system needs, and locational security and reliability needs.

This framework builds upon the Essential System Services framework approved by the Taskforce in the Information Papers: Frequency Control Technical Arrangements and Frequency Control Acquisition, Cost Recovery and Governance.¹

¹ All Taskforce papers are available on the Energy Transformation Taskforce website: <https://www.wa.gov.au/government/document-collections/taskforce-publications>

2. Background

2.1 The Essential System Services Framework in the WEM

The following types of ESS are needed in the SWIS:

1. System-wide frequency management services which maintain the SWIS frequency within its normal operating bands as specified in the Frequency Operating Standard
2. System restart services which restart and restore the system in the event of a major supply disruption or system-wide shut down
3. Locational services which support security and reliability in specific locations on the network
4. Any required services to address emerging power system issues not covered by those above.

As part of the Tranche-1 and Tranche-2 WEM Amending Rules gazetted on 24 December 2020, a framework for frequency control ESS was codified. This framework outlines the three types of frequency control ESS:

- Regulation with separate raise and lower components, which provides for the continuous balancing of electricity supply and demand;
- Contingency Reserve with separate raise and lower components, which provides for the restoration of frequency within its normal bands in the event of a contingency; and
- Rate of Change of Frequency (ROCOF) Control Service which provides a minimum level of inertia on the system to respond to fast frequency decline.

These frequency control ESS will be procured through real-time markets, in which any facility that is capable and accredited for an ESS is able to participate by making offers and providing the service.

These frequency control ESS will be co-optimised with energy in the dispatch algorithm producing, for every five-minute dispatch interval, a MW amount for energy and ESS for every facility that offered into the energy and an ESS market. Because of the co-optimisation process for frequency control ESS, they are referred in the new WEM rules as Frequency Co-optimised ESS (FCESS).

A framework for procuring System Restart Services has also been developed and will be codified in the WEM Rules in 2021. System Restart Services will continue to be procured via standard form contracts between AEMO and market participants with capable facilities.

While the instantaneous balance of energy supply and demand manifests as frequency stability and is maintained by frequency control ESS, there are a range of other technical and operational requirements for power system security that cannot be met by energy dispatch alone. These requirements may include some combination of active power, reactive power, voltage support or fault level for a specified time and location. These requirements may also manifest as network support in SWIS regions where the network is unable to meet reliability expectations.

In contrast with Frequency Control ESS, the specific technical problem that each of these services must solve will be different, and the corresponding technical service is often difficult to specify in advance. In addition, sometimes these services are only required in a specific location which limits the choice of participation, and therefore co-optimisation with energy in a system-wide dispatch algorithm is not workable. For these reasons, it is difficult to co-optimize these services with energy dispatch in real-time. These other services are therefore collectively referred to as Non-Cooptimised Essential System Services (NCESS).

A framework for procuring, paying for, and dispatching NCESS is the subject matter of this paper.

2.2 Problem Definition

The existing WEM Rules recognise the need for ancillary services to address security and reliability issues that cannot be covered by frequency control ancillary services, i.e., by the existing Load Following, Spinning Reserve and Load Rejection Reserve ancillary services. As a result, the existing WEM Rules contain the concept of Network Control Service (NCS) contracts which can be procured by the Network Operator as an alternative to network augmentation, and Dispatch Support Service (DSS) contracts which can be procured by AEMO to address system security issues that cannot be managed by any of the other ancillary services codified in the rules.

As part of the ESS framework, to be implemented in the new WEM from 1 October 2022, new mechanisms for procuring services other than those needed for system-wide frequency control are required. With the penetration of DER in the SWIS, services that support the network in specific locations (for example, voltage stability and system strength), or can meet other emerging system needs (for example, grid-forming or fast-ramping) will become necessary.

A mix of synchronous, dispatchable generation or new technologies, such as storage, will be required to maintain security and reliability of the power system in the wake of increasing intermittent generation. However, with energy demand increasingly being met by low or zero marginal-cost variable renewable energy resources, traditional synchronous plant will not always feature in the efficient energy dispatch merit order and so new services may need to be procured to maintain security and reliability of supply.

A fit-for-purpose NCESS framework is therefore needed to address such emerging issues and to efficiently procure, dispatch and pay for these services.

In addition, the existing concepts of Network Control Services and Dispatch Support Services need to be improved to ensure they fit into the new ESS framework and are efficiently used to address emerging power system security and reliability issues.

The problems with the existing concepts of NCS and DSS are outlined below.

Network Control Service

The existing WEM Rules contemplate NCS as a contract between a Network Operator and a Market Participant for a service that can act as a substitute for transmission or distribution network upgrades. In theory, the Network Operator would procure NCS contracts in sub-network regions where supply reliability may not meet the network planning criteria or service standard benchmarks, and AEMO would be able to dispatch those NCS facilities to maintain supply. However, the standards driving a Network Operator to procure an NCS contract are ambiguous in other regulatory instruments applying to the Network Operator, and are often misaligned with the requirements outlined in the WEM Rules.

For instance, Western Power's Technical Rules, which outline the level of redundancy built into the transmission network to ensure supply reliability², do not align with AEMO's obligation under the WEM Rules to minimise involuntary load shedding in the SWIS. As a result, AEMO, which is required to act under the WEM Rules to limit load-shedding to the unserved energy target (0.002% of annual

² The redundancy in the network is set out in section 2.5 of the Technical Rules. It is defined as the Transmission and Distribution Network Planning Criteria where, for example, an N-0 Criterion implies that supply will be lost in the sub-network at the loss of a single transmission element.

energy consumption), may be restricted in its ability to do so because the network may not be built to support this requirement. As a result of this misalignment between the Network Operator's network planning criteria and AEMO's obligations under the WEM Rules, no NCS contracts (apart from the two legacy contracts described below) have been procured to support reliability and defer transmission upgrades, since the start of the WEM.

The concept of NCS contracts has, however, been used for purposes other than what is stated in clause 5.1.1 of the WEM Rules:

- Generator Interim Access (GIA) arrangements were introduced to facilitate the entry of new renewable technologies in a constrained grid. Western Power has signed NCS contracts with GIA facilities that enable these facilities to be dispatched outside of the dispatch merit order to maintain system security. These GIA NCS contracts will be superseded at the commencement of the new market arrangements, after which all GIA facilities will be dispatched in accordance with the security-constrained economic dispatch algorithm. Similarly, the current arrangements in the Reserve Capacity Mechanism for GIA facilities will be superseded by the Network Access Quantities arrangements from the commencement of the 2022 Reserve Capacity Cycle.
- Temporary NCS contracts were signed between Western Power and Synergy to ensure Synergy's Mungarra and West Kalgoorlie gas turbines are retained (and not retired pursuant to a 2016 Ministerial Direction) as they are needed to support supply reliability in the North Country and Eastern Goldfields regions respectively. These NCS contracts were signed by Western Power in October 2018 to meet an obligation in the NQRS Code requiring that supply reliability be maintained to acceptable levels. These NCS contracts are due to expire on 30 September 2023, and it is anticipated that any future procurement to maintain supply reliability in those regions will be undertaken under the NCESS framework.

Dispatch Support Service

DSS is defined in the existing WEM rules as any ancillary services that are needed to maintain power system security and reliability that are not covered by the other ancillary service categories. It also includes the service of controlling voltage levels in the SWIS, where that service is not already provided under a NCS contract.

Historically, a DSS contract existed with Synergy's Mungarra and West Kalgoorlie facilities to maintain supply reliability in the North Country and Eastern Goldfields regions particularly during transmission network outages. The DSS contract existed to compensate Synergy for the services it provided from those facilities. This contract was superseded by the NCS contract (mentioned above) in October 2018.

No other DSS contracts have existed in the WEM.

The reasons for procuring NCS and DSS contracts has generally not been transparent and open to scrutiny. The NCESS framework will replace the current frameworks for Network Control Services and Dispatch Support Services in the WEM Rules, and provide a more efficient framework for transparently identifying the need, specifying the requirements, procuring, dispatching and recovering costs for new types of ESS not already catered for under FCESS.

2.3 Guiding Principles

The design principles for the NCESS framework are consistent with, but subsidiary to those described in the Taskforce information paper, [Foundation Market Parameters](#).

Principles underpinning the NCESS Framework

The framework for NCESS should:

- be fit for purpose, future ready (to the extent it is efficient), and flexible to changes in the configuration of the power system over time;
- place clear responsibilities on the different entities ensuring that the entity best placed to discharge a function is required and empowered to do so through the appropriate legal instrument or subsidiary document;
- leverage the existing roles and responsibilities of the entities responsible for delivering a secure and reliable power system;
- provide for efficient recovery of costs for services such that the total cost to the system is at its lowest efficient level

2.4 Objectives of the NCESS framework

At a high level, the objectives of the NCESS framework are to:

- create appropriate incentives for non-network services to be procured to meet power system security and reliability requirements in a more economically efficient manner when compared to network augmentation;
- enable the procurement of new services to respond to unforeseen events or changes in the power system that may threaten system security; and
- enable maintenance of power system security and reliability at the lowest efficient cost to consumers.

3. Parameters of the NCESS framework

3.1 Identifying the need for NCESS through system planning

The need for a NCESS will generally emerge in system planning processes used to ensure the evolving power system continues to meet technical requirements and Power System Security and Reliability (PSSR) standards. The planning process will identify the need for alternative NCESS, able to meet PSSR standards and other technical requirements while avoiding or deferring the need to augment the network. There are three entities in the existing SWIS regulatory framework that have planning responsibilities where the need for NCESS could be identified.

- **Western Power**

As the network operator for the SWIS, Western Power plans and builds the transmission and distribution network to adhere to the planning criteria (N-0, N-1, N-1-1) and other technical PSSR standards outlined in the Technical Rules.

Western Power's planning for the transmission network is one avenue for identifying technical requirements that could be addressed by NCESS. Under its current regulatory framework, Western Power submits a Transmission Network Development Plan (TNDP)³ as part of its five-yearly Access Arrangement process. The TNDP outlines Western Power's plan to build the network in response to load and generation growth, in compliance with Technical Rules, network investment strategy, and long-term strategic network objectives.

Network augmentation entails high cost to consumers and may not be the most economically efficient way to meet PSSR standards. This is where non-network solutions (such as NCESS) provided by existing or new market participants can play a role to support power system security and reliability while deferring or avoiding the high costs of network augmentation.

However, the existing transmission network planning processes do not require Western Power to explore alternatives to network augmentation to meet the relevant PSSR standards. The current network planning process does not provide for any automatic reviews where network planning assumptions change or unforeseen events occur. Furthermore, there is no requirement for Western Power to take into account the impact and costs of its network planning on the WEM. As a result, there is no incentive for Western Power to explore non-network NCESS solutions even though procuring such services may assist in meeting network security and reliability needs at a cheaper cost to the consumer.

Under recent modifications made to the Access Code in 2020, Western Power is required to produce an annual network opportunity map for a five-year forward planning horizon focusing on proposing network investment and alternative options to address issues such as voltage levels and fault levels primarily for the distribution network. The network opportunity map could be expanded to include requirements for transmission network planning.

- **AEMO**

AEMO, as the system operator, conducts operational planning processes which can also provide an avenue to identify an emerging need for a service that is not already provided through the frequency

³ The 10 year TNDP submitted as part of Access Arrangement 5 is available here:

<http://www.erawa.com.au/cproot/9936/2/20111007%20-%20D76352%20-%20Access%20Arrangement%20Information%20-%20Appendix%20O%20-%20Transmission%20Network%20Development%20Plan.PDF>

co-optimised ESS. AEMO's relevant operational planning includes medium term and short term projected assessment of system adequacy studies and real-time forecasts of system load and FCESS requirements, which may signal a potential shortfall of specific types of system security services. For instance, as the evening ramp of the system load becomes peakier, fast ramping services may become essential to meet system security needs, and could be procured using the NCESS framework.

- **Coordinator of Energy**

From 1 July 2021, the Coordinator will become responsible for conducting and publishing a 20-year outlook for the energy sector called the Whole of System Plan (WOSP). The WOSP will be published at least once every five years and will:

- plan for the efficient development of the SWIS to meet the power system needs of the SWIS including with respect to Power System Security and Power System Reliability for a planning horizon of at least 20 years;
- assist in the transition to a lower-emissions power system by guiding the efficient integration of renewable generation and identifying opportunities for new technologies, such as energy storage;
- identify requirements for network investment and inform the regulatory test for network projects;
- inform industry's decisions regarding efficient power system investment opportunities in the SWIS; and
- inform policy makers on the future needs of the power system.

In addition, under the new WEM arrangements to commence from October 2022, the Coordinator of Energy will undertake three-yearly reviews of the ESS framework where the need for additional services to support PSSR could also be identified.

Together these planning activities can help identify the need for NCESS to meet PSSR standards or other technical requirements for the system. However, it is important that these planning activities utilise a similar set of assumptions and scenarios to enable coordinated whole-of-system planning, otherwise there is a risk of over-investing in services at high costs to the consumer or under-investing in services leaving the system exposed to security and reliability problems.

In the long term, there may be scope for the Coordinator's whole-of-system plan to harmonise the various network and system planning activities for the SWIS by ensuring all entities involved in planning give adequate consideration to:

- An agreed set of assumptions about:
 - demand growth or reduction
 - connection of new loads or generators
 - retirement of existing generators
 - retirement of network assets
 - a defined set of contingencies as outlined in the Technical Rules
 - a baseline level of system security as provided by the connection requirements to the network for all users
 - a defined set of dispatch scenarios for generation
- Information from the operation of the market (such as market costs) that suggests that investment in network assets would provide a net benefit to the market

- PSSR standards as outlined in relevant regulatory instruments
- Consultation between the Network Operator, System Operator and the Coordinator to agree on the assumptions and standards to be used for system planning
- Customer expectations of reliability
- State development or policy needs as outlined by the Government

To enable identification of the need for NCESS in the short to medium term, modifications to the Access Code will be required to obligate Western Power to produce a public 10-year⁴ Transmission Network Plan, with allowance for annual reviews, and prepared in consultation with AEMO and the Coordinator with agreement over the set of assumptions, scenarios and standards to be used for network planning. Such a network plan would outline the types of requirements that may be more efficiently met by procuring NCESS (if it is proven to be the more economically efficient solution) as opposed to upgrading the network.

NCESS could also be procured in operational planning timeframes (if it is proven to be the more economically efficient solution) to address unexpected events such as a failure of multiple network elements resulting in unforeseen contingency events, which were not accounted for in the transmission network plan.

Where appropriate, any modifications to the Access Code to include requirements for network planning will have regard to existing provisions, to minimise duplication and ambiguity.

3.2 Triggering the NCESS process

3.2.1 Trigger entity

The Taskforce has determined that the following three parties should be able to trigger a procurement process for NCESS:

- Western Power, in consultation with the Coordinator
- AEMO, in consultation with the Coordinator
- The Coordinator

Each of these three entities have a role to play in system planning (as outlined section 3.1), and therefore it is appropriate that each entity is able to trigger a process to procure NCESS if that is the more efficient alternative to existing mechanisms for maintaining power system security and reliability.

Western Power and AEMO will be required to consult with the Coordinator to confirm the trigger. This is because the Coordinator has a role to consider a wide range of matters to ensure a secure and efficient energy system, including State energy development needs, enabling the Coordinator to apply a strategic lens to the procurement of NCESS.

The Coordinator may employ an independent technical expert at her/his discretion to scrutinise the analysis and evidence produced by other trigger entities to ensure an appropriate balance has been

⁴ Western Power's five-year network opportunity map is focussed on identifying (relatively) short term investments to support funding approval for projects, and may miss opportunities for NCESS arrangements that can offset long term network upgrades over a longer time horizon. Similarly the 20-year horizon for the WOSP must necessarily take a higher level view of PSSR issues based on the number and type of assumptions that must be made in order to conduct analysis over that time horizon. A 10-year network planning horizon seeks to find a suitable middle ground to support reasonable economic assessment of NCESS options.

struck between meeting power system security and reliability requirements and keeping overall system cost at its lowest sustainable value.

3.2.2 Timeframe for trigger

Western Power will be able to trigger the process at any time during the 10-year transmission planning timeframe to procure a non-network service to support network security and reliability (e.g., voltage stability, reactive power support, system strength, etc.). AEMO's trigger will occur in operational planning timeframes to procure system-wide frequency management services (e.g., fast ramping service). If the Coordinator determines the NCESS procurement process should be triggered, the Coordinator will implement this through a rule change proposal to change the relevant WEM Rules, or by nominating a priority project under the Access Code.

3.2.3 Reasons for trigger

Each trigger entity will utilise the following reasons for triggering the NCESS procurement process:

- **Western Power**

- If the forecasted or actual magnitude and frequency of energy-uplift payments⁵ in the WEM increases to an uneconomic level (assuming locational and situational market power is being controlled under the relevant processes), this indicates a locational constraint in the network and a case may be made to procure locational services to relieve the network constraint. Energy-uplift payment is the principal mechanism by which the cost of congestion in the network is discovered. These costs, and the frequency of binding network constraints, will be publicly available through AEMO's congestion information resource and market settlement publication.
- Frequent manual intervention by AEMO in the security-constrained dispatch algorithm to relieve non-frequency control constraints such as loss of reactive power or system strength indicates a network security problem, and a case could be made to procure a locational security NCESS. Under the new WEM arrangements, AEMO is required to publish information about intervention events through market advisories.
- If network planning assumptions change at anytime during the network planning timeframe (e.g., demand is lower or higher than forecast), it may signal the need for an emerging service such as reactive power support or voltage stability which could be provided by non-network services located in the relevant part of the network.
- A modification to an existing PSSR standard or the introduction of a new PSSR standard within a network planning cycle may trigger the need to procure a NCESS.

- **AEMO**

- AEMO may forecast an inability to meet a particular power system security standard in system operational planning timeframes signalling the need for a NCESS to support system security.
- A modification to an existing PSSR standard or the introduction of a new PSSR standard may trigger the need to procure a NCESS.

⁵ Energy-uplift payment is a make-whole payment given to Market Participant in respect to its facility that is required to generate to resolve a network constraint even though the Market Participant's real-time market submission for that facility indicates that it is not willing to generate (because it may not be cost-efficient for the Market Participant to do so). Essentially, the energy-uplift payment pays the facility for the difference between its offer price and the market clearing price set at the reference node. More detail is provided in the [Taskforce Paper: Market Settlement](#)

- The FCESS market price may be reaching the cap too often (assuming market power is being controlled under the relevant processes, and there is no scarcity) which could indicate that the existing types of ESS may not be sufficient to resolve a security problem.

- **Coordinator**

- WOSP analysis and/or ESS reviews may indicate emerging power system concerns that cannot be addressed by the existing suite of services.
- State development needs may require new services to be procured.

3.2.4 Service specification

Western Power and AEMO will be responsible for specifying the technical requirements of the service. Service specification must include items such as (but not limited to):

- Type of the service
- Service tenure
- Location where the service may be required (if it is location-based)
- Technical specifications for the facility or equipment to provide the service
- Specifications of how and when the service may be used
- Any minimum availability requirements
- Timeframe requirements for delivery

3.3 NCESS procurement process

3.3.1 Tendering

Western Power and AEMO will be individually responsible for issuing a call for submissions depending on which entity triggered the process. This will be an open tender process and a standard form contract, with acceptable variations, will be used to procure the NCESS.

Western Power's procurement process will be subject to scrutiny by the Economic Regulation Authority (ERA) in accordance with the existing Access Code provisions, including the ex-post review mechanism. A review of relevant Access Code provisions will be conducted to ensure they are fit for purpose for the NCESS framework.

AEMO's procurement process is expected to be similar to the procurement process outlined under the Supplementary ESS Procurement Mechanism (SESSM), and will be subject to compliance monitoring by the ERA.

3.3.2 Participation

Any existing or new market participants may participate in the NCESS procurement process. Existing market participants submitting a NCESS proposal will only be compensated for any incremental costs that are not already covered through participation in the various components of the WEM (Reserve Capacity Mechanism, energy market and FCESS markets).

The same principle will apply to new participants. While they may submit both their fixed and operating costs in the NCESS, providing NCESS only may not be sufficient for the commercial viability of a new facility and the relevant participant may choose to participate in the Reserve

Capacity Mechanism and other components of the WEM to fully recover its costs. New participants will be required to declare in their submissions whether or not the facility has applied for or has been granted capacity credits in respect of the capacity that will provide the NCESS. The rules will be drafted in a way that ensures that customers do not pay for the same amount of capacity twice (e.g. through the RCM and under the NCESS contract).

3.3.3 Selection analysis

Under the Access Code, Western Power is required to assess the use of alternative options services including Network Control Services from Market Participants, to demonstrate whether a network investment proposal meets the New Facilities Investment Test. Further, for “major augmentations” a formal regulatory test and associated consultation processes must be applied before Western Power decides to commit either to the proposed augmentation or pursue alternative options.

AEMO’s selection analysis is anticipated to be similar to the analysis it is required to conduct under the SESSM and will be subject to a review by the ERA.

3.3.4 Contracting

NCESS contracts will be bilateral contracts between the triggering entity (Western Power or AEMO) and the relevant market participant. Certain aspects of the contracts may be made public. These include:

- Identity and location of the facility
- Service specification
- Contract tenure

All tender proposals in the NCESS process will remain confidential to Western Power and AEMO.

3.4 Dispatch and settlement of NCESS

NCESS will feature in the dispatch engine as constraint equations or manual processes to dispatch the NCESS facility in specific ways. For NCESS procured by Western Power, AEMO will be involved to determine the level of control over a facility or elements of the facility to enact the NCESS requirement in accordance with the terms of its contract.

NCESS will not be co-optimised with energy meaning that constraint equations will force required dispatch quantities in order to meet NCESS requirements, however regardless of how the service is dispatched, the resultant behaviour on the system must be represented in the dispatch engine to ensure the contribution of the service is reflected in dispatch.

The settlement for a Western Power-procured NCESS contract will take place off-market, and will compensate for the balance of services after accounting for any payments received through the market settlement processes. For instance, where an existing facility that was receiving energy-uplift payments is contracted for NCESS, its NCESS compensation will take into account the uplift payment it may receive through real-time energy market dispatch. An AEMO-procured NCESS contract will be settled through the market settlement process.

The detailed design of the framework will need to consider how the NCESS contracts are treated under the NAQ mechanism, for example whether certain contracts established to relieve network constraints should not be given priority in the NAQ modelling process.

3.5 Cost recovery for NCESS contracts

Where Western Power procures a NCESS contract, it will recover the costs of the NCESS through its network tariffs. As noted previously, the New Facilities Investment Test guides the assessment of costs and benefits to ensure efficient network investment costs are included within network tariffs

Where AEMO procures a NCESS contract, costs will be recovered from all market participants that have a consumption share over the period of that service.

3.6 Implications for existing NCS and DSS contracts

- The existing GIA-NCS arrangements will not exist after the replacement of NCS by NCESS in the WEM Amending Rules. The dispatch arrangements for GIA facilities will be superseded by the security-constrained economic dispatch arrangements.
- The ongoing requirement for the temporary NCS contracts between Western Power and Synergy for the Mungarra and West Kalgoorlie facilities will continue as NCESS arrangements. These contracts support network reliability in the North Country and Eastern Goldfields regions during planned network outages. Any further procurement of network reliability services for these locations will be undertaken under the new NCESS framework.
- No DSS contracts currently exist in the WEM.

4. Taskforce decision

The Taskforce has endorsed the NCESS framework design as follows:

- The NCESS framework will be codified in relevant regulatory instruments to enable the procurement of security and reliability services to support emerging power system and network needs, not already catered by the existing suite of ESS.
- The Access Code will be reviewed to determine whether changes need to be made to enhance Western Power transmission planning processes to give adequate consideration to non-network options.
- An enhanced transmission network planning process will be codified, having regard to existing provisions, to include:
 - requirements for the Network Operator to consult and agree assumptions, standards and scenarios with AEMO and the Coordinator of Energy
 - requirements for publication and annual review of the transmission network plan.
- Any of Western Power, AEMO and the Coordinator of Energy may trigger an NCESS procurement process. Western Power and AEMO must consult with the Coordinator on the reasons for the trigger.
- Relevant provisions will be introduced to ensure AEMO and Western Power are required to develop and maintain fit for purpose tools to adequately identify any NCESS requirements in a timely manner.
- The Coordinator may direct Western Power and/or AEMO at any time to procure a NCESS – relevant provisions in the WEM Rules and Access Code will be explored, having regard to existing provisions.
- The Coordinator may at her/his discretion appoint an independent technical expert to review the reasons for Western Power and/or AEMO triggering an NCESS procurement to ensure a balance has been achieved between meeting technical requirements and keeping overall system cost to consumers at its lowest sustainable level.
- An open and transparent NCESS procurement process will be codified in the WEM Rules and the Access Code, having regard to existing provisions.
- AEMO will be able to control the facility or its elements to the extent necessary, and in consultation with Western Power, to dispatch the NCESS in accordance with the contract terms.
- NCESS facilities will only be compensated for the balance of their revenue requirements after factoring in revenue collected through various other components of the WEM.
- The costs of NCESS contracts procured by Western Power will be recovered through network tariffs, and those procured by AEMO through settlement in the WEM.