

# Submission to the Position Paper: A Proposed Design for the New Rule Change Assessment Panel

Electricity Market Review Phase 2

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**Economic Regulation Authority**

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## Executive Summary

Best regulatory practice is to appoint an independent rule making decision body and separate rule proposing from the approval of rule changes. The existing WEM arrangements result in actual and perceived conflicts arising due to:

- the IMO being able to propose rule changes and also being the rule decision making body; and
- the IMO having a vested interest in the rules as it is also responsible for administering, monitoring and enforcing compliance with the rules.

The proposed Rule Change Assessment Panel (**RCAP**) design does not adequately deal with these governance issues and introduces further conflict compared with the current arrangements. In summary:

- There is still a lack of separation between the rule proposal process and rule approval as Standing Members of the RCAP, or the organisations they represent, will be able to propose rule changes:
  - The position paper merely notes that, where a Rule Change Proposal is submitted by a Standing Member of the RCAP or by the organisation that the Standing Member represents, the Rule Change Proposal must be approved by a majority of the other members.
  - The proposed Secretariat arrangements are likely to result in staff involved in preparing a rule change proposal, also providing advice to the RCAP in relation to whether a rule change proposal should be approved or not. Significant reliance is placed on a single individual (i.e. the Executive Officer responsible for managing a Service Level Agreement with the IMO) to ensure the advice provided to the RCAP is independent.
- In addition to the existing conflict of interest of the IMO, the proposed membership of the PUO on the panel introduces further issues:
  - Setting energy policy is the role of government, however, best practice is for the day to day operation of the market and approval of market rules to be undertaken independently of government policy makers.
  - Perceived conflict and the impact this may have on private investment due to the Government's ownership of Synergy - the largest generator and retailer in the WEM.

The Authority suggests that further consideration be given to the form and composition of the decision making body to ensure the proposed new rule change model results in an improvement over the current governance arrangements. Ideally this would ensure that all members of the approval body (or the organisations they belong to):

- are not able to propose rule changes; and
- do not have a vested interest in the rules which potentially impacts their objectiveness when considering whether a rule change proposal meets the objectives of the WEM.

## Introduction

The ERA recognises that the current governance arrangements in the WEM reflect the desire to minimise the implementation and operational costs of the wholesale market while maintaining its efficiency and effectiveness. The ERA recognises that given the small size of the WEM relative to other energy markets, there may be a need to compromise on the ultimate rule change approach. However there is a need to minimise or mitigate perceived and actual conflicts of interest in the rule change and approval process.

Concerns related to the IMO being the body which determines whether to approve amendments to the Market Rules and also being responsible for administering and monitoring compliance with the Market Rules, have been raised by Market Participants and by the ERA over a number of years.

For example, specific concerns in relation to the process for three Rule Changes<sup>1</sup> were noted in the Authority's 2012 Wholesale Electricity Market Report to the Minister for Energy. These concerns included:

- views in submissions not being taken into account;
- outcomes being significantly different from those projected during the Rule Change process;
- significant modifications made during the Rule Change process resulting in them not being captured by the consultation process; and
- rule changes being progressed too quickly at the expense of thoroughness in ensuring they could be implemented in an efficient way.

The EMR's discussion paper recognised that, although the IMO has a detailed knowledge of how the rules work in practice, it also has a vested interest in the form and content of the rules made. It considered the IMO is well placed, and should be able, to propose rule changes to better achieve market objectives. It considered that separating rule proposing from rule-making would address the risk, or perception of risk, of vesting too much power with one entity. The Discussion Paper also considered it more likely to result in a more widely supported process and outcome if the rule change was considered and decided upon by another body.

The Discussion Paper identified both the PUO and the ERA as suitable to take on this role, although it considered that if either took over the responsibility of rule changes they should then be precluded from proposing changes to the market rules themselves.

The EMR steering committee recommendation in the Options Paper, was to allow the IMO to be able to continue to propose rule changes but that decisions to approve rule changes should be undertaken by a different body.

As set out in the Options Paper, the EMR steering committee considered the rule change approval body needs to have:

- experience in public consultation processes;
- capability to undertake policy analysis work in a transparent and predictable manner; and

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<sup>1</sup> Calculation of the Capacity Value of Intermittent Generation (RC 2010\_25 and RC 2010\_37), Reassessment of Allowable Revenue during a Review Period (RC\_2011\_02) and Competitive Balancing and Load Following Market (RC\_2011\_10)

- limited self interest in the outcomes of market rules.

The Options Paper recognised that setting up a new body would be costly and that, where possible, existing bodies should be utilised to streamline roles and responsibilities. However, rather than making a single existing body responsible for rule change approvals, the steering committee considered creating a new panel, comprising the chairs of the ERA, IMO and the Co-ordinator of Energy, would provide a “potentially less conflicted alternative to the current arrangements”.

The options paper did not discuss any alternative models or explicitly set out its views regarding why the decision making role could not be undertaken by an existing body, such as the PUO or the ERA as considered in the Discussion Paper.

The position paper notes the principal outcome of reform to governance of the Market Rule Change process is to address the potential for a conflict of interest from the IMO performing the rule making function while also operating and enforcing compliance with the Market Rules. The position paper also notes the reform will remedy acknowledged deficiencies within the existing Rule Change process and improve transparency and accountability of rule change approvals. It is proposed that the reforms will also be mirrored for the Gas Services Information arrangement.

## Position Paper Proposed Design

The position paper proposes the following:

- Setting up a panel comprised of three standing members (Chair of the ERA, Chair of the IMO and the Co-ordinator of Energy) plus the ability for the Minister to appoint up to two additional members (who must not come from the IMO, PUO, ERA or be market participants).
- Although standing members are appointed on the basis of the office they hold, they will be required to advance the Market Objectives rather than the interests of their respective organisations.
- The panel will be subject to the same governance framework that currently applies to the IMO, with only those changes needed to accommodate standing members being appointed automatically by reason of the office they hold and to address the potential for a conflict of interest. The framework will include prescriptions for:
  - Constitution and proceedings.
  - Duties of members.
  - Minister’s ability to direct the panel (as a body) with the requirement that the direction must be tabled before Parliament.
  - Periodic reporting in the form of a statement of annual activities.
  - Reporting to the Minister and giving the Minister access to information (and management of confidential information in that process).
  - Members immunity from liability.
  - Minister to appoint Chair (who must not be the Chairman of the IMO).
  - Minister may appoint additional members after consulting with Chair.

- Minister may remove a sitting additional member at any time and without giving any reason, or to create a vacancy.
- The Constitution, including terms of reference, will be approved by the Minister and made publicly available.
- Members must attend meetings as alternates will not be permitted (constitution will allow for meetings by telephone or other remote means).

The panel will be supported by a Secretariat which will be responsible for four key roles:

- Administration:
  - administering the Rule Change process;
  - maintaining and publishing information and reports, including a statement of annual activities;
  - administering a public, separately-branded website to publish any information required by the Market Rules in regard to the progress of Rule Change Proposals;
  - managing meetings and consultations including (where appropriate) producing agenda, papers and minutes; and
  - providing a point of interface to the Rule Change Assessment Panel for market participants and the Minister for Energy.
- Assistance:
  - Assisting Rule Change Proponents to develop and refine their Rule Change Proposals.
- Drafting:
  - To the extent that a Rule Change Proponent has not done so, draft the text of rule amendments.
- Assessment:
  - Assessing Rule Change Proposals and preparing reports for the Rule Change Assessment Panel including summaries of consultation outcomes, to support the RCAP's decision to approve or reject the proposed changes to the Market Rules.

The position paper proposes creating a Secretariat as a separate legal entity, answering directly to the RCAP. The position paper identifies two ways in which the independent Secretariat can be implemented.

The preferred option is one in which the Secretariat comprises a single individual acting as the Executive Officer appointed by the RCAP.<sup>2</sup> Through the Executive Officer, the RCAP will appoint the IMO under a Service Level Agreement to provide secretariat services in support of the Rule Change process and RCAP. The Executive Officer will manage the Service Level Agreement.

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<sup>2</sup> The paper notes the Executive Officer must not be a current or recent staff member of the IMO and most likely, to minimise cost, will be a staff member from the PUO.

The position paper notes the cost of the IMO staff will continue to be recovered via Market Fees at potentially no, or marginal, additional cost compared with the current arrangements. It considers the additional cost of the Executive Officer would be relatively modest and potentially could be absorbed by the home agency (most likely the PUO).

The position paper notes that, although its preferred option for the Secretariat is the most cost effective, it does mean that almost all the Secretariat services will still be carried out by IMO staff which may continue to raise concerns in relation to the IMO's influence over the Rule Change process. A number of mitigating factors are noted including:

- The IMO's responsibilities will be set out in a Service Level Agreement monitored by the Executive Officer.
- Rule change proponents can raise any concerns they may have with the IMO's conduct in relation to the Rule Change process with the Executive Officer.

The position paper's alternative design is based on a fully resourced Secretariat noting this would make it easier to demonstrate that the Rule Change process is fully independent of the IMO's influence. While it recognises this option is likely to be best practice, the Steering Committee had two primary concerns in relation to it:

- difficulties in obtaining the benefit of the Independent Market Operator's practical knowledge and experience; and
- additional costs to fully resource the Secretariat.

The position paper notes the two options it has proposed in relation to the Secretariat are not mutually exclusive and, it may be possible to start with the one-person Secretariat and migrate over time to a more fully resourced Secretariat if considered necessary.

## Evaluation of Position Paper Proposal

The position paper notes the Steering Committee has assessed options for the characteristics and composition of the RCAP that will best promote transparency and efficiency while avoiding a conflict of interest as much as possible.

The ERA considers the proposed RCAP does not deal adequately with the current conflict arising due to the IMO being able to both propose and approve rule changes and its vested interest in the rules due to its responsibilities for administering, monitoring and enforcing compliance with them. Furthermore, introducing a direct rule making role for the PUO as a government policy body, will result in a further diminution of independence in the rule change decision making body from that which already exists.

The proposed RCAP moves further away from independent oversight of rule changes by:

- bringing a policy making body, i.e. the PUO, directly into the rule making process;
- inserting a single-person (the Executive Officer, also PUO) with an extremely high administrative and management burden to act as a conduit from the supporting secretariat, basically a single point of failure;
- retaining the bulk of the current analysis work and unavoidable influence of the IMO in actually performing those secretariat functions.



## Best Practice Elsewhere

In determining the appropriate model for Western Australia, the ERA considers it important to keep in mind best regulatory practice and learnings from other jurisdictions. Although the small size of the WEM may make it difficult to fully implement measures adopted by larger markets, nevertheless it is important to be cognizant of best practice. The ERA has reviewed both the NEM and overseas jurisdictions to inform its views. These are discussed below.

### Australia

The current electricity market is largely an outcome of the Hilmer National Competition Policy Review in 1993. Although the Hilmer Review did not directly focus on the Governance Arrangement, per se, it did provide the framework for the industry structure – that ultimately led to the design of the current Governance Framework.

In 2002, a review was undertaken by Warwick Parer, titled: *Towards a truly national and efficient Energy Market* (Parer review). This review more directly assessed the Governance Framework in the energy industry, and provided sound principles that should apply in the Governance arrangements for the energy industry. These principles are relevant to the Governance arrangements in the WEM.

The Parer review noted that the role of the Government in the Governance arrangements is critical. It stated that the SA Government submission, which noted that “It is important for Governments to provide a policy oversight role, while refraining from having any involvement at the operational level”,<sup>3</sup> appeared to be broadly accepted by a wide range of stakeholders.<sup>4</sup>

The Parer review strongly argued against government involvement, particularly when governments own energy assets. It stated:

“The risk of inappropriate control being exercised by governments is magnified when they own a high proportion of both the generators and retailers operating within a particular regional market”

Importantly, it makes the point that actual occurrence of conflict is not necessary for the separation, just the perception of conflict is sufficient to undermine investor confidence:

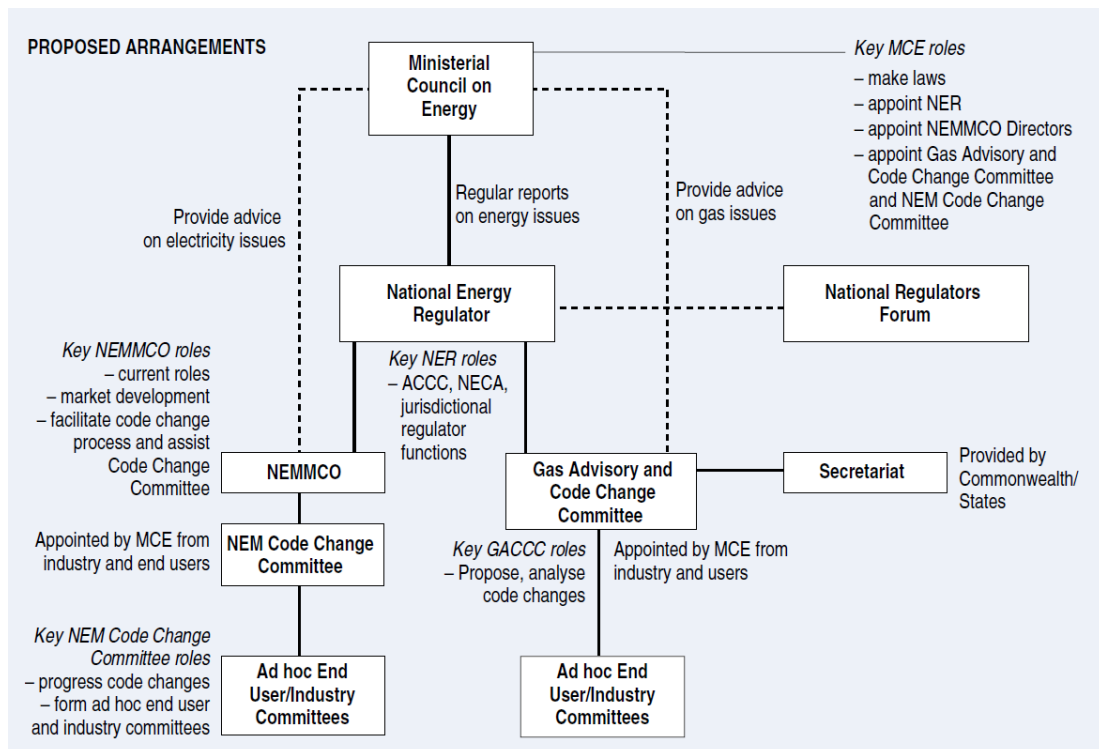
“Structures that create potential conflicts of interest can lead to inappropriate influence. Whether or not this is actually occurring, it is an unhealthy arrangement and deters investment.”

The Parer review panel’s proposed governance arrangements are represented diagrammatically as follows:

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<sup>3</sup> W.R. Parer, D. Agostini, P. Breslin and R. Sims *Towards a truly national and efficient energy market*, 2002 South Australian Government submission 146 to the Issues Paper, p. 9.

<sup>4</sup> W.R. Parer, D. Agostini, P. Breslin and R. Sims *Towards a truly national and efficient energy market*, 2002 p. 79.



Source: Towards a Truly National and efficient energy Market, 2002

Following the Parer review, the COAG entered into the Australian Energy Market Agreement (AEMA). Western Australia is a signatory to this Agreement. The AEMA reflected the formal commitment to establish the institutional arrangements necessary to implement the Parer review outcomes.

A key change to the Parer review recommendations was to separate regulation and rule enforcement from the determination of rule changes, rather than a single regulatory body responsible for both, as was envisaged by the Parer review panel. This gave rise to the current national institutions; the Australian Energy Regulator (AER), and the Australian Energy Market Commission (AEMC). The AER undertakes all regulatory functions including market surveillance, monitoring and enforcement. The AEMC is the rule maker and also undertakes reviews of the energy markets.

More recently, the COAG Energy Council set up a panel in December 2014 to undertake a review of the governance arrangements in the Australian energy market.<sup>5</sup> The panel published its draft report on 31 July 2015.<sup>6</sup> The panel's general conclusion is that the division of functions established by the current governance arrangements remains appropriate, although it has identified some scope for greater clarity on the roles of the various institutions to provide greater focus to the ways they execute their roles and enhance the ways that they interact with each other.

<sup>5</sup> The review was initiated in response to a COAG commitment to review the governance arrangements in the Australian energy market five years after the establishment of the Australian Energy Market Operator (AEMO) in 2009.

<sup>6</sup> *Review of Governance Arrangements for Australian Energy Markets* Draft Report July 2015 <https://scer.govspace.gov.au/files/2015/07/Review-of-Governance-Arrangements-for-Australian-Energy-Markets-Draft-Report-July-2015.pdf>

The draft report highlights the need for the independence of the rule maker from policy makers, rule adjudicators, rule proponents, and market operators. The report states that the independence of the rule maker “fosters an impartial and stable regulatory environment, with appropriate checks and balances resistant to political pressures. The vision of separation of functions as set out in the Parer Report remains appropriate in today’s environment.”<sup>7</sup>

The draft report notes the AEMC’s dual functions; ‘market development’ and ‘rule-maker’ functions. It highlights the synergies in having these dual functions, and recommends the expansion of its ‘market development’ function to incorporate a ‘strategic direction’ function to assist the Energy Council in its policy setting role. Included in this advice would be a comprehensive review of the rules with a focus on whether the rules are consistent with the strategic priorities, are fit for purpose and are not impeding beneficial and innovative developments in energy markets.<sup>8</sup>

The draft report also notes that some stakeholders raised the possibility of the AEMC initiating its own rule changes<sup>9</sup> with the rationale being it could take a more proactive role in shaping the energy market. However, the panel considered this outcome to be problematic as it would allow the AEMC to set policy direction in the energy market rather than provide advice to augment the Council’s leadership. The panel considered maintaining the prohibition put the onus for rule change development on stakeholders other than the AEMC.

In relation to AEMO, the panel noted that some stakeholders considered that “market development” was being undertaken by AEMO, perhaps without a specific mandate from the Council. Stakeholders pointed to a lack of clarity regarding the institutional responsibility for market development functions. The panel acknowledged the lack of clarity regarding AEMO’s role in market development, and concluded that AEMO should not be assigned any specific tasks in the market development process. However, the panel considered it essential to recognise the understanding and expertise that AEMO possesses in terms of market and system operation.

## Overseas

The ERA has also undertaken a review of the governance arrangements in place in other significant jurisdictions around the world. As noted above, as the WEM is very small compared to other electricity markets, it may not be feasible to adopt all of the features of larger markets but it is still useful to review. A summary of the 14 jurisdictions examined is included in Appendix 1 of this submission. In the majority of cases, the decision making body is a separate entity from the market operator.

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<sup>7</sup> *Review of Governance Arrangements for Australian Energy Markets Draft Report July 2015* <https://scer.govspace.gov.au/files/2015/07/Review-of-Governance-Arrangements-for-Australian-Energy-Markets-Draft-Report-July-2015.pdf> ], p. 29.

<sup>8</sup> The draft report recommends that the AEMC’s mandate should be revised to include an obligation to advise the Council through SCO every three years on strategic direction, and propose the priorities for the Council work programme. Included in this advice would be a comprehensive review of the rules as a whole to help inform this process. This review should be directed at advising whether the rules are consistent with the strategic priorities, are fit for purpose and are not impeding beneficial and innovative developments in energy markets. In the intervening years, this document should be updated annually to address any major unanticipated changes in the market and advise on their implications for the strategic priorities and facilitate timely adjustments to the work plan.” p 44.

Of the more developed markets, the closest analogue to *current* WEM arrangements appears to be Ontario, in that the market operator IESO is responsible for and has authority over market rule changes. However, while the independent regulator (Ontario Energy Board) does not determine rule changes *per se*, all such changes must be notified to the OEB and it has the legal authority to revoke them, referring the change back to the IESO. Ontario's arrangements hence still vest an important degree of oversight with an independent body.

The ERA has also considered less developed markets which were identified by stakeholders as being similar to the WEM:

- The Philippines market arrangements include a rule change committee hosted by the independent market operator. However, final rule change approval is vested with the government.
- South Korea uses a rule change committee, hosted and chaired by the market operator, which appears to have final approval of rule changes.

In relation to the proposed RCAP, examples of rule change committees were found but it appears final approval of rule changes is generally vested in a separate body:

- Ireland and Great Britain are perhaps the closest analogue as they employ a rule change panel or committee which includes (but is not limited to) representation from the market operator and the independent regulator. However final approval of any rule change is vested with the regulator, and any secretariat functions provided for those panels<sup>10</sup> does not impinge on the secretariat functions of the regulator in undertaking that final approval.
- The Singapore market arrangements also involve a rule change committee hosted by the independent market operator. However, final rule change approval is vested with the regulator.

## Design of the WEM decision making body

Although not explicitly discussed in the Options Paper, the underlying premise of the panel appears to be that, since the IMO is accepted as having conflict, introducing the PUO and ERA, who also (allegedly) have conflicts, will neutralise each other's conflict resulting in an outcome that is free of (or significantly diminished) conflict.

The ERA considers this line of thinking is flawed. Rather than attempting to counter conflict with additional conflict, the ERA considers further thought is needed to designing a decision making body which is able to objectively consider whether a rule change proposal meets the objectives of the WEM. Related to this, true independence can only be achieved by not allowing the rule making decision body to propose rule changes. This implies the decision making body should not, ideally, include organisations or individuals which require the ability to propose rule changes.

Clearly cost and complexity of arrangements also need to be taken into account. The "ideal" solution may not be affordable. However, decisions in relation to the trade-off between "ideal" and cost need to be taken carefully.

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<sup>10</sup> In Great Britain this is actually undertaken by the regulator.

The decision making body also needs to have sufficient expertise, or the ability to acquire such expertise, to accurately and appropriately apply the WEM objectives in its assessment.

As identified in the position paper, clearly the decision making body will need to be supported by a Secretariat. The ERA considers the criteria for selecting a secretariat is similar to that for the decision making body.

The ERA has set out its views below on the extent to which it considers the proposed members of the RCAP meet the independence criteria. It has also given consideration to the AER/AEMC which have been suggested by some stakeholders as potential decision makers for the WEM rules.

## PUO

The ERA recognises that setting policy is the role of government. The PUO should be focussed on advising the Minister in relation to policy. As noted in its submission to the EMR discussion paper, until recently, successive governments have not given the Western Australian electricity market sufficient priority to make the necessary changes in policy settings to refine the market.

The EMR has been a major step forward in addressing issues such as the Reserve Capacity Mechanism, the market governance framework and the high costs associated with unconstrained network access. These issues were too broad to be captured fully by the normal market rule change process. However, in the absence of an appropriately resourced policy body with sufficient remit, these matters have not been properly addressed until now.

The ERA considers it essential that the Government continues to prioritise energy policy, particularly given the challenges which are emerging in relation to new technologies. The PUO, as the main energy policy agency, plays a key role in facilitating this. The ERA considers, consistent with best practice as discussed above, the day to day operation of the market and approval of market rules should be undertaken independently of government policy makers. As is currently the case, policy direction can be given by Ministerial Direction.

In addition, the PUO, as a Government department which is subject to Ministerial directions, is conflicted because of the Government's ownership of significant energy assets. This conflict (or even a perception of conflict) can seriously undermine private sector investment in the industry; one of the three objectives of the EMR.

For the same reasons, the ERA considers the PUO is also conflicted in relation to providing secretariat support to the decision making body.

## IMO

The IMO has a number of conflicts which affect its independence in relation to approving rule changes. These include:

- Lack of independence in relation to approving rule changes due to it being responsible for operating the market in accordance with the rules, monitoring participants' compliance with the rules and taking enforcement action when necessary. If it also takes on responsibility for system management (as is currently planned), the IMO's compliance obligations will increase further.

- The need for it to be able to propose rule changes reflecting its detailed knowledge of how the rules work in practice which make it well placed to propose rule changes to better achieve market objectives.

The IMO has significant expertise in the market rules and has been instrumental in developing them since the market commenced. Similar to AEMO as identified by the panel currently reviewing the NEM governance arrangements, it is essential to recognise the understanding and expertise that the IMO possesses in terms of market operation and ensure it is utilised.

The ERA recognises that the IMO as the market operator will most likely continue to (and should) be a significant rule change proponent. Given the need for the IMO to continue to be able to develop rule change proposals, and the vested interest it has in the rules due to its monitoring and compliance responsibilities, the IMO should not be included in the RCAP. For the same reasons, as noted in the position paper, it is conflicted in providing secretariat services to the RCAP.

However, as is the case in the NEM for rule change proposals from electricity market regulatory bodies who have consulted with the public on the nature and content of the rule change proposal before submitting the request, consideration could be given to fast track the approval process for rule change proposals from the IMO. This would enable the IMO to continue to utilise its expertise in rule development, including its ability to consult with stakeholders to develop robust, timely and effective proposals whilst ensuring rule change approvals are made objectively.

## ERA

The ERA welcomes the opportunity to be included in the rules approval process. From having undertaken annual reviews of the WEM since it commenced, the ERA has developed a significant capability in, and understanding of, the WEM and believes it can add value to the Rules change approval process.

The ERA is aware of concerns by some stakeholders that the ERA also has a conflict of interest. However, the Authority does not consider it has a significant conflict, as discussed below.

The ERA's role in the Wholesale Electricity Market can be broadly categorised into the following three functions:

- Monitoring the effectiveness of the market in meeting the WEM objectives and investigating any market behaviour if it considers that the behaviour has resulted in the market not functioning effectively. It must report on these matters to the Minister for Energy.
- Specific investigative functions including:
  - If the IMO advises the ERA that a market participant has offered prices above its short run marginal cost (SRMC) and that the behaviour relates to market power, the ERA must investigate this behaviour. If prices are found to be above SRMC, the ERA must request the IMO to take enforcement action.
  - Rule Participants, which include the IMO and System Management, may notify the ERA (or IMO) of behaviour that they consider reduces the effectiveness of the market, including behaviour related to market power. The ERA, with the assistance of the IMO, must investigate the



behaviour identified in any such notification and publish the results of its investigation.

- Approval of various administered prices in the Market, as well as allowable revenue approval for IMO and System Management.

As noted above, the IMO is responsible for monitoring participants' compliance with the rules and taking enforcement action.<sup>11</sup> The ERA's role is to monitor how effectively the market is meeting the WEM objectives and to provide advice on this to the Minister. The Authority does not consider this role would significantly compromise its ability to objectively assess whether rule change proposals meet the objectives of the WEM. The Authority notes the similarities to the AEMC's market development function whereby it conducts independent reviews for the Energy Council, including the ability to self-initiate reviews into the operation and effectiveness of the rules or any matter relating to the rules.<sup>12</sup>

The investigations the ERA must take if requested by the IMO or Rule Participants, have a fairly narrow focus as they only relate to specific behaviour identified by the IMO or Rule Participant. The IMO would be responsible for any enforcement action if required. The ERA does not consider these investigations compromise its ability to approve rule changes.

The ERA's role in approving various administered prices and allowable revenue, also does not compromise its ability to approve rule changes. They are two very disparate roles; the rule making role is to assess the rule change proposal against the objectives of the WEM, whereas, the approval process is to provide regulatory oversight to administered charges to ensure the charges are applied in accordance with the Market Rules.

### Other Panel Members

The design set out in the position paper includes provision for the Minister to appoint additional members to the decision making body.

The ERA considers expanding the RCAP to include additional members could help to strengthen the capability and independence of the panel. However, it would be important to ensure that such members are fully independent and able to act independently. The criteria in the *ERA Act* for appointing governing body members may be a suitable model to adopt.

### AEMC/AER

Some stakeholders have suggested including the AEMC and/or AER in the decision making body. The ERA does not know the AER or AEMC's views on whether this would be appropriate or practical, so can only offer the following observations.

Clearly either body would have the necessary independence. Given the current functions of the two, the AEMC which has the rule making role in the NEM, is more likely to have the expertise necessary to undertake the role.

However, there may be difficulties for the national bodies to play an active role in a market which has not adopted the NEM design. Certainly there would be a need to develop sufficient understanding of the WEM to be able to effectively undertake a decision making

<sup>11</sup> In the NEM this role is undertaken by the AER.

<sup>12</sup> AEMC submission to the Review of Governance Arrangements for Australian Energy Markets Issues Paper, p. 17. <https://scer.govspace.gov.au/files/2015/05/27-AEMC-non-conf.pdf>

role, particularly when the market rules in the WEM are largely about the market operations (as opposed to network regulation, as is the case in the NEM).

### **Market Advisory Committee**

Although the Market Advisory Committee (MAC) is not proposed as a member of the RCAP, it is envisaged that it will continue to play an important role.

The ERA agrees that an independent advisory committee reporting directly to the decision making body can add significantly to the robustness of the decision making process. To achieve this it is important that the committee is able to operate independently, is given a clear remit on what it has been asked to do and provides its advice in a transparent manner directly to the decision making body.

The ERA considers this would be best achieved by requiring the decision making body to request the advice of the committee on each rule change proposal.

The ERA notes that the MAC currently also provides a role in assessing and developing pre-rule change proposals. The ERA agrees that undertaking effective consultation with market participants when developing rule change proposals is essential to ensuring sensible rule change proposals. However, as with the decision making body, the process for developing rule change proposals should be separated from the decision making process to ensure decisions can be made objectively.

### **Conclusion**

The structure and format of the decision making body and secretariat should be reviewed to ensure conflicted entities or individuals are not included. There also needs to be clear separation between the development of rule proposals and the decision making process.

Ideally, ensuring the decision making body is comprised of members who are not able to initiate rule change proposals would better ensure that rule changes reflect the needs of stakeholders and policy makers whilst ensuring there is a transparent and independent assessment of whether the rule meets the WEM objectives.



## Appendix 1 Electricity Governance Arrangements in other Jurisdictions

### *Best practice regulation in theory*

Most literature examining electricity market reform and governance is concerned with regulation of network natural monopoly, tariff setting and revenue allocation, and market failure — commonly not with wholesale market rule governance as such.<sup>13</sup> Thatcher and Sweet do refer explicitly to enhancing ‘the efficiency of rule-making’ under overall policy guidance as a rationale underpinning delegation of regulatory power from legislators to independent agencies,<sup>14</sup> but this is not elaborated in depth. However, delegation is an overarching principal of regulatory reforms: creation of independent regulatory agencies is a fundamental component, to mitigate against both ‘government failure’ and the influence of industry interests (albeit with associated arrangements to guard against regulatory capture).<sup>15</sup> Independent regulation is widely regarded as optimal to facilitate the core objectives of efficient open access and transparent market competition, ultimately to serve the best interests of energy consumers. In some countries the market competition and surveillance role is performed by a general competition authority.

The 2012 OECD recommendation on regulatory policy and governance,<sup>16</sup> while not prescriptive, suggests the use of independent agencies in general terms where decisions may have ‘significant economic impacts’:

**7. Develop a consistent policy covering the role and functions of regulatory agencies in order to provide greater confidence that regulatory decisions are made on an objective, impartial and consistent basis, without conflict of interest, bias or improper influence.**

...

7.3 Independent regulatory agencies should be considered in situations where:

»»There is a need for the regulatory agency to be independent in order to maintain public confidence;

»»Both the government and private entities are regulated under the same framework and competitive neutrality is therefore required; and

»»The decisions of regulatory agencies can have significant economic impacts

Somewhat closer to the specific question of market rule making, Pollitt draws relevant lessons in his analysis of electricity market failures in Argentina due to political interference with previously highly-successful reforms. Pollitt asserts that ‘government should restrict

<sup>13</sup> For example, A. Larsen et al., ‘Independent regulatory authorities in European electricity markets’, *Energy Policy*, vol. 34, no. 17, 2006, 2858–2870, doi: 10.1016/j.enpol.2005.05.003; K.S. Johannsen, *Regulatory independence in theory and practice—a survey of independent energy regulators in eight European Countries*, Denmark, AKF, February 2003, [http://www.portal.akf.dk/udgivelser/2003/pdf/regulatory\\_independence.pdf](http://www.portal.akf.dk/udgivelser/2003/pdf/regulatory_independence.pdf).

<sup>14</sup> M. Thatcher and A.S. Sweet, ‘Theory and practice of delegation to non-majoritarian institutions’, *West European Politics*, vol. 25, no. 1, 2002, 1–22.

<sup>15</sup> F. Boehm, ‘Regulatory capture revisited—lessons from economics of corruption’, *Internet Centre for Corruption Research (ICGG) Working Paper*, 2007, [http://cec.shfc.edu.cn/download/20101029141313\\_349385497095.pdf](http://cec.shfc.edu.cn/download/20101029141313_349385497095.pdf).

<sup>16</sup> OECD, *Recommendation of the Council of the OECD on Regulatory Policy and Governance*, 2012, <http://www.oecd.org/gov/regulatory-policy/49990817.pdf>.

itself to broad policy objectives and avoid having anything to do with the day to day running of the ... system';<sup>17</sup> he explicitly refers to government control of electricity market operation and regulation despite the existence of an ISO and independent regulator.

## Summary of arrangements in other jurisdictions

### New Zealand

The Electricity Authority is the principal independent Crown entity responsible for market regulation, development, monitoring, and market rule making. The Electricity Authority also develops and administers the grid code.

Rule change process	Electricity Authority managed, with advice provided by Advisory Groups appointed by the Authority
Rule change approval	Electricity Authority
Rule change proponents	Any person
System operator	Transpower (transmission owner and operator)
Market operator	Spot market operation contracted to NZX
Government policy	Oversight by responsible Minister of Energy and Resources Policy direction may be given through Statements of Government Policy
Surveillance & monitoring	Electricity Authority
Access and tariff regulation	Electricity Authority
Useful references	Electricity Authority: <a href="http://www.ea.govt.nz/">http://www.ea.govt.nz/</a> Transpower: <a href="https://www.transpower.co.nz/">https://www.transpower.co.nz/</a>

<sup>17</sup> M. Pollitt, 'Electricity reform in Argentina: Lessons for developing countries', *Energy Economics*, vol. 30, no. 4, 2008, 1536–1567 (p. 1560), doi: 10.1016/j.eneco.2007.12.012.

## United States

### FERC, State PUCs, and NERC

Electricity system policy making, regulation, and governance in the United States is complex and multilayered. For a useful explanation, see The Regulatory Assistance Project's 2011 guide (Lazar).<sup>18</sup>

FERC is the national independent agency responsible for regulation of interstate electricity transmission and associated tariffs; note that the possibility of interstate transmission or commerce — an interconnection — is sufficient to establish FERC jurisdiction. Critically, FERC must approve changes to market rules that affect the rates, terms or conditions applying to electricity sales constituting interstate commerce. FERC may also issue regulatory Orders obliging such changes, and these can require significant modification of market design.

Other aspects of market oversight and regulation occur within states under the jurisdiction of State Public Utility Commissions (PUCs), including retail markets, consumer tariffs, utility revenue allocation, and oversight of privately-owned generators. These are regulatory institutions in their own right, though their powers are subject to FERC appeal. Regulatory Commissions' form and functions can vary substantially between states.

State energy offices represent government policy, usually as separate agencies.

Per FERC policy [Order 719], ISOs/RTOs delegate market surveillance functions to third party independent Market Monitoring Units (MMUs) which report back to the ISO/RTO and to FERC.<sup>19</sup> MMUs have little enforcement power, rather referring violations back to FERC.

NERC also plays an important role in developing and mandating technical grid code and associated standards.

#### Useful references

FERC: <http://www.ferc.gov>

National Association of State Energy Officials (NASEO):

<http://www.naseo.org/>

NERC: <http://www.nerc.com/>

<sup>18</sup> J. Lazar, *Electricity Regulation In the US: A Guide*, Montpelier, Vermont, The Regulatory Assistance Project, March 2011, [http://www.raonline.org/docs/RAP\\_Lazar\\_ElectricityRegulationInTheUS\\_Guide\\_2011\\_03.pdf](http://www.raonline.org/docs/RAP_Lazar_ElectricityRegulationInTheUS_Guide_2011_03.pdf).

<sup>19</sup> See description, history, and criticisms in R.J. Michaels, 'Electricity Market Monitoring and the Economics of Regulation', *Review of Industrial Organization*, vol. 32, no. 3/4, 2008, 197–216, doi: 10.1007/s11151-008-9172-1.

## PJM

PJM is the RTO for the interconnection covering 13 Eastern US states and the District of Columbia.

Rule change process	PJM managed through stakeholder committees and groups as defined by Manual 34
Rule change approval	FERC approval of regulatory filing, though some changes to Manuals may be made by PJM directly provided they do not affect tariff rates or terms and conditions <sup>20</sup>
Rule change proponents	Any stakeholder via committee structure membership (see <a href="http://www.pjm.com/committees-and-groups/committees/mrc.aspx">http://www.pjm.com/committees-and-groups/committees/mrc.aspx</a> ), or PJM staff
System operator	PJM (RTO)
Market operator	
Government policy	State PUCs and the Organization of PJM States participate in PJM stakeholder committees but currently do not vote. They may elect to become full members. Member state energy agencies represent government directly.
Surveillance & monitoring	PJM delegated to Monitoring Analytics
Access and tariff regulation	FERC
Useful references	Member state PUCs: <a href="http://www.pjm.com/committees-and-groups/state-commissions.aspx">http://www.pjm.com/committees-and-groups/state-commissions.aspx</a> Organization of PJM States, Inc. (OPSI): <a href="http://www.opsi.us/">http://www.opsi.us/</a> representing those PUCs Member state energy offices are listed at <a href="http://www.naseo.org/members-states">http://www.naseo.org/members-states</a> PJM: <a href="http://www.pjm.com">http://www.pjm.com</a>

<sup>20</sup> PJM, *Federal Power Act Sections 205 and 206*, 31 March 2015, <http://www.pjm.com/~media/about-pjm/newsroom/fact-sheets/federal-power-act-sections-205-and-206.ashx>.

## NYISO

New York Public Service Commission (NYPSC) regulates tariffs and sets significant policy direction, such as the current major REV initiative as part of the New York State Energy Plan, launched in June 2015. The New York State Energy Research and Development Authority is the state energy agency; its president and CEO also chairs the New York State Energy Planning Board legislated in 2009.

Rule change process	NYISO assigns relevant Manual to appropriate stakeholder working groups and subcommittees to evaluate revisions
Rule change approval	Majority (58%) approval by appropriate committee, with FERC approval of regulatory filing
Rule change proponents	Stakeholders or NYISO staff
System operator	NYISO (TSO)
Market operator	
Government policy	NYPSC, New York State Energy Research and Development Authority, New York State Energy Planning Board
Surveillance & monitoring	Delegated to Potomac Economics
Access and tariff regulation	FERC
Useful references	NYPSC: <a href="http://www3.dps.ny.gov/">http://www3.dps.ny.gov/</a> New York State Energy Research and Development Authority: <a href="http://www.nyserda.ny.gov/">http://www.nyserda.ny.gov/</a> NYISO: <a href="http://www.nyiso.com">http://www.nyiso.com</a>

*ISO-NE*

ISO-New England is the RTO for the interconnection covering 8 North Eastern US states.

<b>Rule change process</b>	Managed by ISO-NE Market Committee(s)
<b>Rule change approval</b>	FERC approval of regulatory filing
<b>Rule change proponents</b>	
<b>System operator</b>	ISO-NE (RTO)
<b>Market operator</b>	
<b>Government policy</b>	New England Conference of Public Utilities Commissioners Member state energy agencies represent government directly
<b>Surveillance &amp; monitoring</b>	Delegated to Potomac Economics
<b>Access and tariff regulation</b>	FERC
<b>Useful references</b>	New England Conference of Public Utilities Commissioners (NECPUC): <a href="http://www.necpuc.org/">http://www.necpuc.org/</a> Member state energy offices are listed at <a href="http://www.naseo.org/members-states">http://www.naseo.org/members-states</a> ISO-NE: <a href="http://www.iso-ne.com/">http://www.iso-ne.com/</a>

## CAISO

California PUC (CPUC) regulates utility tariffs and rates for retail market, as well as privately owned generation and transmission; municipal authorities regulate public owned. CPUC works with FERC for regulation of generation and transmission that cross state boundaries, and for design of the wholesale markets. The California Energy Commission (CEC) is the state energy office.

Rule change process	Proposed Revision Request (PRR) are submitted to CAISO for consultation and review within the change management process
Rule change approval	Final decision by CAISO Change Management Coordinator, with final FERC approval of regulatory filing
Rule change proponents	Any stakeholder (market participant, local regulatory authority) or by CAISO staff
System operator	CAISO (ISO)
Market operator	
Government policy	CEC, CPUC
Surveillance & monitoring	CAISO Department of Market Monitoring, in concert with independent Market Surveillance Committee external advisory group
Access and tariff regulation	FERC
Useful references	CPUC: <a href="http://www.cpuc.ca.gov/">http://www.cpuc.ca.gov/</a> CEC: <a href="http://www.energy.ca.gov/">http://www.energy.ca.gov/</a> CAISO: <a href="https://www.caiso.com">https://www.caiso.com</a>

## ERCOT

ERCOT is unusual in the United States as it acts as a separate entity due to very limited interconnection to other power systems. ERCOT is the ISO, and the Public Utilities Commission of Texas is the state regulator. The State Energy Conservation Office (SECO) is the state energy office.

PUCT hosts a large volume of rules affecting the power system and wholesale markets, in addition to the Nodal Protocols managed by ERCOT.<sup>21</sup> In a footnote, Lazar explains:

An interconnection encompassing multiple states is considered to be in interstate commerce, and therefore within FERC's jurisdiction when the power flows on both sides of the state line are synchronous. To avoid FERC jurisdiction, Texas (through ERCOT) has limited interconnection across state lines to so-called back-to-back DC interconnections, through which power is converted from alternating current to direct current, transferred to the adjacent synchronous interconnection, and then converted

<sup>21</sup> See <http://www.puc.texas.gov/agency/rulesnlaws/subrules/electric/Electric.aspx> and <http://www.ercot.com/mktrules/nprotocols/index.html>

back to alternating current. In this case, the transaction over the DC intertie is actually FERC jurisdictional, but the interconnection behind the DC intertie in Texas is not considered to be in interstate commerce.<sup>22</sup>

<b>Rule change process</b>	ERCOT management of rule change process by guiding requests to appropriate subcommittees or working groups
<b>Rule change approval</b>	Approval by ERCOT process and reviewed by PUC of Texas for public interest test; final approval by PUC of Texas (unless any FERC jurisdiction becomes established)
<b>Rule change proponents</b>	Nodal Protocol Revision Request submitted by individual person on behalf of stakeholder subcommittee, working group, or task force sponsor (market participants)
<b>System operator</b>	ERCOT (ISO)
<b>Market operator</b>	
<b>Government policy</b>	SECO, PUC of Texas
<b>Surveillance &amp; monitoring</b>	Delegated to Potomac Economics; Texas Reliability Entity, Inc (monitors NERC compliance).
<b>Access and tariff regulation</b>	FERC
<b>Useful references</b>	PUC of Texas: <a href="http://www.puc.texas.gov/">http://www.puc.texas.gov/</a> SECO: <a href="http://www.seco.cpa.state.tx.us/">http://www.seco.cpa.state.tx.us/</a> ERCOT: <a href="http://ercot.com/">http://ercot.com/</a>

<sup>22</sup> Lazar, March 2011, p.24, fn. 26.



## Canada

Canada shares some aspects of electricity system governance (eg, reliability corporations) with the United States, reflecting physical interconnections. However generally Canadian provinces have separate governance systems.

## Alberta

Alberta is a largely islanded system, with limited interconnections to British Columbia, Saskatchewan, and Montana. The Alberta Utilities Commission (AUC) is the independent economic regulator for electricity and gas markets, and ISO rule change arbiter. AUC also develops its own rules for retail markets.

Rule change process	AESO develops ISO Rule changes through a consultative process, filing the final rule proposal with AUC
Rule change approval	AUC determination
Rule change proponents	Issues are raised with AESO, who then determines whether a rule change should progress
System operator	AESO (ISO)
Market operator	
Government policy	Alberta Energy
Surveillance & monitoring	MSA, AESO (reliability compliance), and AUC (issues penalties)
Access and tariff regulation	AUC
Useful references	Alberta Energy: <a href="http://www.aer.ca/">http://www.aer.ca/</a> AUC: <a href="http://www.auc.ab.ca/">http://www.auc.ab.ca/</a> Alberta Electric System Operator (AESO): <a href="http://www.aeso.ca/">http://www.aeso.ca/</a> Alberta Market Surveillance Administrator (MSA): <a href="http://www.albertamsa.ca/">http://www.albertamsa.ca/</a>

## Ontario

Economic regulation of electricity and gas is performed by the independent Ontario Energy Board (OEB) agency.

Rule change process	IESO oversees a consultative process
Rule change approval	IESO Board approves a rule change; however, notice is given to the OEB and they have legal authority to revoke any amendment and refer it back to IESO.
Rule change proponents	Any individual 'with an interest in the operation of the electricity market' may request a rule change.
System operator	IESO (ISO/TSO)
Market operator	
Government policy	Ontario Ministry of Energy
Surveillance & monitoring	OEB
Access and tariff regulation	OEB
Useful references	Ontario Ministry of Energy: <a href="http://www.energy.gov.on.ca/en/">http://www.energy.gov.on.ca/en/</a> Ontario Energy Board (OEB): <a href="http://www.ontarioenergyboard.ca/OEB">http://www.ontarioenergyboard.ca/OEB</a> Independent Electricity System Operator (IESO): <a href="http://www.ieso.ca/">http://www.ieso.ca/</a> (actually appears to function as a full transmission system operator; ie, as well as dispatch and wholesale market operator)

## European Union

EU member states are subject to a range of governance mechanisms within the EU framework. Market liberalisation and the progression toward a single European electricity market from the late 1990s has been driven by initiatives such as the EU *Electricity Directive*. The Directorate-General for Energy of the European Commission is the major EU-wide policy body in this context, and it does create and implement major energy market frameworks that affect individual states.

However individual countries vary substantially in their domestic and cross-border power system operational practices and market structures. For example, Great Britain now includes a capacity market (as does Ireland) while Germany remains energy-only.

Network code changes and harmonisation efforts, along with aspects of market rule development, are coordinated by ENTSO-E (European Network of Transmission System Operators for Electricity).

### Useful references

Directorate-General for Energy: <https://ec.europa.eu/energy/en>

ENTSO-E: <https://www.entsoe.eu/>

Agency for the Cooperation of Energy Regulators (ACER):  
<http://www.acer.europa.eu/>

Council of European Energy Regulators (CEER):  
<http://www.ceer.eu/>

## Germany

Economic regulation and oversight of electricity, gas, telecommunications, post, and railway markets is conducted by the Bundesnetzagentur (Federal Network Agency). Electricity regulation covers network tariffs, open network access, retail customer switching, and aspects of generator grid connection. State regulatory authorities also exist, regulating power supply companies with under 100,000 customers without interstate activities. Competition regulation and monitoring is tasked to the independent competition authority, Bundeskartellamt.

Wholesale markets are provided by exchanges that span a number of European countries.

Major changes in the electricity system are ongoing under the Energiewende framework.

Rule change process	Market rules are less readily identifiable as a distinct entity due to the shared wholesale trading platforms; ie, Germany is part of a broader European electricity market, not only physical network interconnection.
Rule change approval	Overall, it appears that the Federal Ministry for Economic Affairs and Energy plays a prominent role in market design evolution and, of course, policy direction. See for example the current future electricity market design green paper. <sup>23</sup>
Rule change proponents	
System operator	Multiple TSOs (one per region), oversight by Bundesnetzagentur
Market operator	Wholesale spot market provided by European Power Exchange (EPEX SPOT), futures trading by European Energy Exchange (EEX). For day-ahead market, Germany and Austria share a common bidding zone; Germany is directly coupled to Nordic countries, Western European countries, and Great Britain through a common market clearing algorithm.
Government policy	Bundesministerium für Wirtschaft und Energie (Federal Ministry of Economic Affairs and Energy)
Surveillance & monitoring	As of mid-2015, monitoring is conducted by the Market Transparency Unit of Bundesnetzagentur operating jointly with Bundeskartellamt (competition authority)
Access and tariff regulation	Bundesnetzagentur, as well as EU/European Council Directives, ENTSO-E, ACER
Useful references	Bundesnetzagentur: <a href="http://www.bundesnetzagentur.de/">http://www.bundesnetzagentur.de/</a> Bundeskartellamt: <a href="http://www.bundeskartellamt.de/EN">http://www.bundeskartellamt.de/EN</a> Market Transparency Unit: <a href="http://www.markttransparenzstelle.de/">http://www.markttransparenzstelle.de/</a> Bundesministerium für Wirtschaft und Energie (Federal Ministry of Economic Affairs and Energy): <a href="http://www.bmwi.de/EN/">http://www.bmwi.de/EN/</a> Energiewende: <a href="http://energytransition.de/">http://energytransition.de/</a>

<sup>23</sup> Federal Ministry for Economic Affairs and Energy (BMWi), *An Electricity Market for Germany's Energy Transition: Discussion Paper of the Federal Ministry for Economic Affairs and Energy (Green Paper)*, Berlin, The Federal Ministry for Economic Affairs and Energy, October 2014, <https://www.bmwi.de/BMWi/Redaktion/PDF/G/gruenbuch-gesamt-englisch,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>.

## Ireland

The Commission for Energy Regulation (CER) is the independent regulator of energy and water in the Republic of Ireland. CER conducts economic regulation of monopoly electricity transmission and oversight, and development of the joint (with Northern Ireland) all-island Single Electricity Market (SEM) — in this context CER acts with the Northern Ireland Utility Regulator as the SEM Committee. The CER also provides advice to government on regulation and market operation. Grid code development is under the jurisdiction of EirGrid via its Grid Code Review Panel, which includes CER membership.

While final market rule changes are approved by the CER (more correctly, SEM Committee), CER, EirGrid, and SEMO all participate in the modifications committee process.

CER has been prominently active in comprehensive market and technical changes under the DS3 programme.

<b>Rule change process</b>	Managed by the modifications committee with representation from industry participants, CER (secretariat), EirGrid, and SEMO
<b>Rule change approval</b>	CER final approval of Trading and Settlement code modifications proposed by the SEM modifications committee
<b>Rule change proponents</b>	Trading and Settlement rule change proposals via SEMO modification process. Any person may submit a proposal, though substantial analysis work is required in determining impacts.
<b>System operator</b>	EirGrid (TSO)
<b>Market operator</b>	SEMO, joint venture operation of single island wholesale market with Northern Ireland TSO, SONI
<b>Government policy</b>	Policy direction and CER oversight by the Department of Communications, Energy and Natural Resources
<b>Surveillance &amp; monitoring</b>	CER Market Monitoring Unit
<b>Access and tariff regulation</b>	CER
<b>Useful references</b>	DCENR: <a href="http://www.dcenr.gov.ie/">http://www.dcenr.gov.ie/</a> CER: <a href="http://www.cer.ie/">http://www.cer.ie/</a> and as SEM Committee <a href="http://www.allislandproject.org/">http://www.allislandproject.org/</a> EirGrid: <a href="http://www.eirgrid.com/">http://www.eirgrid.com/</a> SEMO: <a href="http://www.sem-o.com/">http://www.sem-o.com/</a>

## United Kingdom

England, Wales, and Scotland are managed as a single entity, Great Britain. Regulation of the electricity system and wholesale and retail markets is performed by the independent regulatory authority (executive agency), Ofgem (Office of Gas and Electricity Markets). The wholesale market is defined by the Balancing and Settlement Code (BSC), administered by ELEXON. Competition oversight is governed by the Competition and Markets Authority, an ‘independent non-ministerial department’.

Rule change process	ELEXON administers the BSC Panel, which includes a chair appointed by Ofgem, industry members and a TSO representative.
Rule change approval	Ofgem approves BSC Panel recommendation
Rule change proponents	Modifications to the BSC can be proposed by any Party to the Code, designated consumer representatives, or (in limited circumstances) the BSC Panel. Modifications are differentiated from Issues, in that the former requires the Proposer to put forward a clear solution.
System operator	England and Wales, National Grid (TSO); Scotland (Scottish Power Transmission (TSO))
Market operator	ELEXON operates balancing and settlement functions. Significant quantities of energy remain bilaterally traded, often using OTC arrangements. As noted for Germany above, wholesale spot market is provided by European Power Exchange (EPEX SPOT) (which merged with the APX power exchange in 2015) and by N2EX (UK market operated by Nord Pool), <sup>24</sup> futures trading by European Energy Exchange (EEX).
Government policy	Department of Energy and Climate Change
Surveillance & monitoring	Competition and Markets Authority, Ofgem
Access and tariff regulation	Ofgem
Useful references	Department of Energy and Climate Change (DECC): <a href="https://www.gov.uk/government/organisations/department-of-energy-climate-change">https://www.gov.uk/government/organisations/department-of-energy-climate-change</a> Ofgem: <a href="https://www.ofgem.gov.uk/">https://www.ofgem.gov.uk/</a> Competition and Markets Authority: <a href="https://www.gov.uk/government/organisations/competition-and-markets-authority/">https://www.gov.uk/government/organisations/competition-and-markets-authority/</a> ELEXON: <a href="https://www.elexon.co.uk/">https://www.elexon.co.uk/</a> National Grid: <a href="http://www.nationalgrid.com/uk">http://www.nationalgrid.com/uk</a> Scottish Power Transmission: <a href="http://www.scottishpower.com/">http://www.scottishpower.com/</a>

<sup>24</sup> Some background, though written prior to EPEX/APX merger: [http://www.epexspot.com/en/press-media/press/details/press/Power\\_Exchanges\\_agree\\_on\\_the\\_European\\_Cross-Border\\_Intraday\\_Solution](http://www.epexspot.com/en/press-media/press/details/press/Power_Exchanges_agree_on_the_European_Cross-Border_Intraday_Solution)

## South East Asia

### Singapore

The Singapore island electricity system was the first in Asia to implement a liberalised competitive wholesale market. The market is operated by the Energy Market Company (EMC) and regulated by the Energy Market Authority (EMA).

Rule change process	Changes are reviewed by the Rule Change Panel, appointed by the EMC board, with secretariat functions provided by EMC. The Panel is chaired by an EMC member, and includes representation from market participants and consumers as well as the system operator. The EMA is not represented.
Rule change approval	Rule Change Panel recommends rule changes to the EMC board, who then submits its decision to the EMA for final approval.
Rule change proponents	Any interested party
System operator	Power System Operator (PSO), a division of EMA
Market operator	EMC (IMO)
Government policy	EMA
Surveillance & monitoring	EMC Market Surveillance and Compliance Panel
Access and tariff regulation	EMA
Useful references	Energy Market Authority (EMA): <a href="https://www.ema.gov.sg/">https://www.ema.gov.sg/</a> Energy Market Company (EMC): <a href="https://www.emcsg.com/">https://www.emcsg.com/</a> Power System Operator (PSO): <a href="https://www.ema.gov.sg/Power_System_Operator.aspx">https://www.ema.gov.sg/Power_System_Operator.aspx</a>

## Philippines

The Philippines wholesale electricity market commenced in 2006, covering the major islands of Luzon and Visayas; an interim electricity market has been created to deal with supply deficiencies in the third major island of Mindanao. The market is operated by the Philippine Electricity Market Corporation (PEMC) and regulated by the Energy Regulatory Commission (ERC).

<b>Rule change process</b>	Changes are reviewed by the Rules Change Committee, appointed by (but may not be members of) the PEMC board. The Committee mirrors the PEMC board representation structure, including members from market participants and consumers as well as the system operator and transmission sector. The ERC is not represented.  Note that the rule change process was itself subject to a recent change that, inter alia, aimed to clarify the approvals process. <sup>25</sup>
<b>Rule change approval</b>	Rule Change Committee recommends rule changes to the PEMC board, who then submits its decision to the Department of Energy for final approval. Note that the ERC does not appear to play a role in this process.
<b>Rule change proponents</b>	Any interested party, including government
<b>System operator</b>	National Grid Corporation of the Philippines (NGCP) (ISO)
<b>Market operator</b>	PEMC (IMO)
<b>Government policy</b>	Department of Energy
<b>Surveillance &amp; monitoring</b>	PEMC Market Surveillance Committee
<b>Access and tariff regulation</b>	ERC
<b>Useful references</b>	Philippine Electricity Market Corporation (PEMC): <a href="http://www.wesm.ph/">http://www.wesm.ph/</a> Energy Regulatory Commission (ERC): <a href="http://www.erc.gov.ph/">http://www.erc.gov.ph/</a> Department of Energy: <a href="https://www.doe.gov.ph/">https://www.doe.gov.ph/</a> National Grid Corporation of the Philippines (NGCP): <a href="http://www.ngcp.ph/">http://www.ngcp.ph/</a>

<sup>25</sup> Proposal

[http://www.wesm.ph/inner.php/the\\_market/market\\_governance/pem\\_committees/rules\\_change\\_committee/rules\\_change\\_proposal/open\\_topics/336](http://www.wesm.ph/inner.php/the_market/market_governance/pem_committees/rules_change_committee/rules_change_proposal/open_topics/336) and final approval by DOE  
[http://www.wesm.ph/admin/downloads/download.php?download=DC2015-07-0013\\_Adopting\\_Further\\_Amendments\\_to\\_the\\_WESM\\_Rules\\_\(Procedure\\_for\\_Changes\\_to\\_the\\_WESM\\_Rules\\_and\\_Market\\_Manuals\).pdf](http://www.wesm.ph/admin/downloads/download.php?download=DC2015-07-0013_Adopting_Further_Amendments_to_the_WESM_Rules_(Procedure_for_Changes_to_the_WESM_Rules_and_Market_Manuals).pdf)



## South Korea

South Korea's electricity system and wholesale market is operated by the independent Korea Power Exchange (KPX). The Korea Electric Power Corporation (KEPCO), previously the government monopoly but now a 'market-oriented public corporation', provides transmission and has a role in developing all aspects of the power system; the Korea Finance Corporation holds 29.94% share and the Korean government 21.17%.<sup>26</sup> Regulation and market rule governance is performed by the Korea Electricity Commission (KOREC).

Rule change process	The Rule Amendment Committee of KPX's Market Operation Committee (KPX CEO as chair), with representatives from market participants, independent experts, and government. Unclear if KOREC is represented.
Rule change approval	Rule Amendment Committee appears to have final approval authority. Note that a lack of English-language materials in this context makes these conclusions necessarily somewhat uncertain.
Rule change proponents	KPX, market participants, KOREC
System operator	KPX (TSO)
Market operator	
Government policy	Ministry of Trade, Industry and Energy; KEPCO supervision by government, KOREC
Surveillance & monitoring	Electricity Market Surveillance Committee with membership determined by KOREC chair and participation by KPX
Access and tariff regulation	KOREC
Useful references	The Korea Electric Power Corporation (KEPCO): <a href="http://kepco.co.kr/">http://kepco.co.kr/</a> Korea Power Exchange (KPX): <a href="https://www.kpx.or.kr/">https://www.kpx.or.kr/</a> Korea Electricity Commission (KOREC): <a href="http://www.leadernews.co.kr/korec_home/eng/">http://www.leadernews.co.kr/korec_home/eng/</a> Ministry of Trade, Industry and Energy: <a href="http://english.motie.go.kr/">http://english.motie.go.kr/</a> Korea Electric Association: <a href="http://www.electricity.or.kr/english/">http://www.electricity.or.kr/english/</a>

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