

MODIFICATION PROPOSAL FORM			
Proposer <i>(Company)</i>	Date of receipt <i>(assigned by Secretariat)</i>	Type of Proposal <i>(delete as appropriate)</i>	Modification Proposal ID <i>(assigned by Secretariat)</i>
Tynagh Energy	6th October 2022	Standard	Mod_07_22 v3
Contact Details for Modification Proposal Originator			
Name	Telephone number	Email address	
Cormac Daly		c.daly@tynaghenergy.ie	
Modification Proposal Title			
Indexation to Calculation of Capacity Payments for New Capacity			
Documents affected <i>(delete as appropriate)</i>	Section(s) Affected	Version number of T&SC or Agreed Procedure used in Drafting	
T&SC Part B	Section F.17		
Explanation of Proposed Change <i>(mandatory by originator)</i>			
<p>This modification proposal seeks to include a term in the calculation of capacity payments to account for construction-related inflation for new capacity. It is proposed that this adjustment will only be activated in circumstances where construction and operations-related inflation exceed a standard threshold. This will help to mitigate the risk that projects which secure new capacity contracts will be unable to build as a result of rising inflation costs.</p> <p>Recent events including re-opening following COVID-19 lockdowns and the Russian invasion of Ukraine have resulted in worldwide inflation spikes. Construction and material costs in particular have seen significant upwards movements. This has amplified the risk of new capacity securing contracts in the Capacity Market, and subsequently incurring costs at a significantly higher rate than expected at the time of securing a contract. This would likely result in projects being abandoned as a result of becoming financially infeasible. Due to the nature of the long-term capacity auctions (T-3 or T-4), it is impossible to accurately predict the actual inflation at the time of bidding into the auction.</p> <p>While it is reasonable to expect some inflation when bidding for new capacity, it is not possible to forecast inflationary pressures at the level currently being witnessed. This modification is only intended to apply where inflation is beyond a level which could reasonably be managed by participants. As such, we are proposing that any adjustment to capacity payments will discount a target rate of indexation representing indexation applied to the Auction Price Cap (i.e., 2% in the upcoming T-4 auction).</p> <p>Tynagh believes that this proposal is consistent with wider policy developments made in order to address inflation. In December 2021, the SEM Committee announced that the auction price cap would be inflated by 2% per annum for the period 2022-2025. While this is a positive development, we believe it does not do enough to address the risk of inflation on new capacity. Firstly, the 2% inflation per annum is used to reflect the standard target level of inflation for Ireland. Inflation will be measured based on Consumer Price Index (CPI).</p> <p>Secondly, while adjustments to the Auction Price Cap may seek to address New Capacity for upcoming auctions, it does not address the risk faced by projects which have already secured a contract and will continue to face inflation between now and the construction completion date and ongoing for the duration of the contract. This modification, if accepted, will help to protect projects from such instances by adjusting capacity payments as calculated in the Trading and Settlement Code. We believe that securing the New Capacity currently in the pipeline will mitigate the risk of needing emergency generation in the short-term, at significant cost to consumers.</p> <p>In May 2022, the Irish Minister for Public Expenditure and Reform announced measures to address the effects of exceptional construction-related inflation on public works contracts. Under the newly introduced</p>			

framework, third-parties with contracts for the delivery of public works may recover inflation-related costs (on materials and energy) from 1 January 2022 onwards. This is clear recognition of the effect of inflation on construction of important infrastructure, and the measures required to address this risk.

We consider this modification proposal to serve a similar purpose in ensuring that essential infrastructure can be delivered in the form of New Capacity, in the event of extraordinary inflation changes. We consider this modification appropriate for inclusion in the Trading and Settlement Code given that it will primarily affect the calculation of capacity payments.

Legal Drafting Change

(Clearly show proposed code change using **tracked** changes, if proposer fails to identify changes, please indicate best estimate of potential changes)

In order to enact this modification, we propose the inclusion of an additional term Section F.17.1 – Calculation of Capacity Payments.

F.17.1 Calculation of Capacity Payments

F.17.1.1 The Market Operator shall calculate the Capacity Payment ($CCP_{\Omega\gamma}$) for each Capacity Market Unit, Ω , in each Imbalance Settlement Period, γ , as follows:

$$CCP_{\Omega\gamma} = \sum_{n \in \gamma, qCCOMMISS \neq 0} \left(qC_{\Omega n} \times PCP_{\Omega n} \times \frac{1}{ISPIY_{\gamma}} \times INFMOD_{uy} \right)$$

where:

- (a) $qC_{\Omega n}$ is the Capacity Quantity for Capacity Market Unit, Ω , for Contract Register Entry, n , determined in accordance with the Capacity Market Code;
- (b) $PCP_{\Omega n}$ is the Capacity Payment Price payable to Capacity Market Unit, Ω , for Contract Register Entry, n , determined in accordance with the Capacity Market Code;
- (c) $\sum_{n \in \gamma, qCCOMMISS \neq 0}$ is a summation over all Contract Register Entries, n , for Capacity Market Unit, Ω , relevant in Imbalance Settlement Period, γ , and which has commissioned in accordance with the Capacity Market Code; ~~and~~
- (d) $ISPIY_{\gamma}$ is the total number of Imbalance Settlement Periods in the Capacity Year, γ ; ~~and~~
- (e) $INFMOD_{uy}$ is the inflation modifier for the relevant Capacity Unit, u , applicable to the relevant Capacity Year, γ , calculated in accordance with Section F.17.1.2.

F.17.1.2 The inflation modifier $INFMOD$, will be calculated on an annual basis at the beginning of each Capacity Year and defined as:

$$INFMOD_{uy} = \left(1 + (CINF_u - AIND_u) \right)^{INFPERIOD_u}$$

where:

- (a) $CINF_u$ is the average annualized inflation (or deflation) for Capacity Unit, u , beginning with the date of Capacity award and ending on the date which is the beginning of the relevant Capacity Year where $INFMOD_{uy}$ is calculated. $CINF_u$ will be calculated based on the average Consumer Price Index consisting of an even split between rate in Ireland and the United Kingdom.
- (b) $AIND_u$ is the upwards or downwards indexation (if any) applied to the Auction Price Cap in the relevant Capacity Auction, as relevant to the Capacity Unit, u . Where no indexation has been included in the Auction Price cap, $AIND$ is assumed to be zero.
- (c) $INFPERIOD_u$ is the period of time, in years rounded to nearest .5, beginning with the date of Capacity award and ending on the date of the beginning of the relevant Capacity Year for which $INFMOD$ is calculated with respect to Capacity Unit, u .

Implementing the modification in this fashion would mean that Capacity Auction results would remain unchanged from how they are currently presented, with the only change occurring to the TSC calculation of Capacity Payments.

It is our intention that the AIND, or Auction Indexation, can be specified on an annual basis prior to a Capacity Auction. In 2021, the SEM Committee included a 2% indexation to the Auction Price Cap, which would represent the AIND for that year. Note that this parameter will only account for indexation applied to a Price Cap (rather than wholesale Price Cap changes themselves).

This modification would require the following terms added to the TSC glossary:

INFMOD is the inflation modifier as calculated in Section F.17.1.2

Calculated Inflation (CINF) is the average annualized inflation (or deflation) for the period beginning on the date when a New Capacity contract is awarded and ending on the first date of the year in which the Capacity Payments are being calculated. CINF should be calculated based on an average inflation rate representing the Consumer Price Index (CPI) in both Ireland and the United Kingdom.

Auction Indexation (AIND) is the rate of indexation applied to Capacity Auction Price Caps. Changes to Auction Price Caps are published each year through the CRM Parameters with respect to each Capacity Auction. Any changes to indexation should be identified within these Parameters decision.

Inflation Period (INFPERIOD) is the length of time in years beginning on the date when a Capacity Contract is awarded and ending on the first date of the relevant Capacity Year during which Capacity Payments will be calculated. INFPERIOD should be rounded to the nearest .5 years.

Modification Proposal Justification *(Clearly state the reason for the Modification)*

Recent inflation pressure, particularly in costs relating to construction and materials has created a significant risk of projects securing capacity contracts, but ultimately being unable to build as a result of increased costs. The nature of Capacity Auctions, for New Capacity three to four years out, means there is room for substantial inflation movement between the date of contract award and the beginning of the relevant Capacity Year. In normal circumstances, it may be possible for project developers to account for and manage this cost. However, the current economic climate means that this is no longer possible, and it is highly likely that projects will be faced with significant downside.

In some instances, this issue has already been realised, for example with new renewable energy projects which were awarded contracts under RESS-1 in Ireland. Of the 1,275MW awarded contracts under RESS-1, only 630MW are expected to be energised by the end of this year (which was the expected completion date). It is understood that a number of these project are at risk of never completing, due in part to rising construction costs – in some cases increasing by 10-15%¹.

We believe that measures are required in order to address inflation and secure the delivery of new capacity which is critical infrastructure for the island of Ireland. The necessity of these projects being delivered has been emphasised by security of supply concerns which arose in 2021 as a result of unplanned outages and low-wind periods. As Ireland moves towards an electricity system with greater intermittent generation, the need for new and flexible conventional generation will increase in order to support renewables. Failure to address this risk is likely to expose Ireland to further security of supply concerns and obstruct the transition to a low-carbon electricity system.

In their December 2021 decision to include indexation in the Capacity Auction price caps, the SEM-Committee recognised the significance of inflation to delivery of New Capacity and adjusted the price cap by 6.12% (based on a 2% target level of inflation for each year from 2022-2025). However, this level of inflation is not suitable for two reasons. Firstly, the Russian invasion of Ukraine has further increased inflationary pressures from when the SEM-C decision was made. Secondly, we consider it more appropriate to use a construction-specific inflation rate, given that this is the primary cost exposure for new capacity, and construction and materials related inflation has risen at a faster rate than general inflation.

¹ <https://irishsolarenergy.org/half-of-state-backed-renewable-projects-are-behind-schedule/>

The SEM Committee considered the inclusion of indexation as part of their consultation on the CRM and decided in SEM-16-012 not to include inflation in Capacity Auctions. The rationale provided by the SEM Committee was that participants would be better placed to manage inflation risk, and that the implementation of indexation across two countries would be complex. While this was not previously an issue, current market conditions mean that this approach is no longer appropriate for delivering new capacity projects.

While this modification has the potential to result in slightly higher capacity payments. We believe that ultimately the benefit to the consumer is a net-positive as the risk of supply shortages or potential load-shedding is minimised. The risk of such shortages was highlighted in the SEM in 2021, and if new capacity cannot be delivered, this risk will continue to exist.

Code Objectives Furthered

(State the Code Objectives the Proposal furthers, see Section 1.3 of Part A and/or Section A.2.1.4 of Part B of the T&SC for Code Objectives)

A.2.1.4 The aim of this Code to facilitate the achievement of the following objectives:

b. to facilitate the efficient, economic and coordinated operation, administration and development of the Single Electricity Market in a financially secure manner;

c. to facilitate the participation of electricity undertakings engaged in generation, supply or sale of electricity in the trading arrangements under the Single Electricity Market; and

g. to promote the short-term and long-term interests of consumers of electricity on the island of Ireland with respect to price, quality, reliability, and security of supply of electricity.

Implication of not implementing the Modification Proposal

(State the possible outcomes should the Modification Proposal not be implemented)

As mentioned above, failure to address this issue will result in significant obstacles for new capacity projects on the island of Ireland. Failure to deliver this critical infrastructure will be detrimental to Ireland’s security of supply, and the transition to a low-carbon electricity system.

<p>Working Group <i>(State if Working Group considered necessary to develop proposal)</i></p>	<p>Impacts <i>(Indicate the impacts on systems, resources, processes and/or procedures; also indicate impacts on any other Market Code such as Capacity Market Code, Grid Code, Exchange Rules etc.)</i></p>

Please return this form to Secretariat by email to balancingmodifications@sem-o.com

Notes on completing Modification Proposal Form:

1. If a person submits a Modification Proposal on behalf of another person, that person who proposes the material of the change should be identified on the Modification Proposal Form as the Modification Proposal Originator.
2. Any person raising a Modification Proposal shall ensure that their proposal is clear and substantiated with the appropriate detail including the way in which it furthers the Code Objectives to enable it to be fully considered by the Modifications Committee.
3. Each Modification Proposal will include a draft text of the proposed Modification to the Code unless, if raising a Provisional Modification Proposal whereby legal drafting text is not imperative.
4. For the purposes of this Modification Proposal Form, the following terms shall have the following meanings:

Agreed Procedure(s):	means the detailed procedures to be followed by Parties in performing their obligations and functions under the Code as listed in either Part A or Part B Appendix D "List of Agreed Procedures". The Proposer will need to specify whether the Agreed Procedure to modify refers to Part A, Part B or both.
T&SC / Code:	means the Trading and Settlement Code for the Single Electricity Market. The Proposer will also need to specify whether all Part A, Part B, Part C of the Code or a subset of these, are affected by the proposed Modification;
Modification Proposal:	means the proposal to modify the Code as set out in the attached form
Derivative Work:	means any text or work which incorporates or contains all or part of the Modification Proposal or any adaptation, abridgement, expansion or other modification of the Modification Proposal

The terms "Market Operator", "Modifications Committee" and "Regulatory Authorities" shall have the meanings assigned to those terms in the Code.

In consideration for the right to submit, and have the Modification Proposal assessed in accordance with the terms of Section 2 of Part A or Chapter B of Part B of the Code (and Part A Agreed Procedure 12 or Part B Agreed Procedure 12) , which I have read and understand, I agree as follows:

1. I hereby grant a worldwide, perpetual, royalty-free, non-exclusive licence:
 - 1.1 to the Market Operator and the Regulatory Authorities to publish and/or distribute the Modification Proposal for free and unrestricted access;
 - 1.2 to the Regulatory Authorities, the Modifications Committee and each member of the Modifications Committee to amend, adapt, combine, abridge, expand or otherwise modify the Modification Proposal at their sole discretion for the purpose of developing the Modification Proposal in accordance with the Code;
 - 1.3 to the Market Operator and the Regulatory Authorities to incorporate the Modification Proposal into the Code;
 - 1.4 to all Parties to the Code and the Regulatory Authorities to use, reproduce and distribute the Modification Proposal, whether as part of the Code or otherwise, for any purpose arising out of or in connection with the Code.
2. The licences set out in clause 1 shall equally apply to any Derivative Works.
3. I hereby waive in favour of the Parties to the Code and the Regulatory Authorities any and all moral rights I may have arising out of or in connection with the Modification Proposal or any Derivative Works.
4. I hereby warrant that, except where expressly indicated otherwise, I am the owner of the copyright and any other intellectual property and proprietary rights in the Modification Proposal and, where not the owner, I have the requisite permissions to grant the rights set out in this form.
5. I hereby acknowledge that the Modification Proposal may be rejected by the Modifications Committee and/or the Regulatory Authorities and that there is no guarantee that my Modification Proposal will be incorporated into the Code.