

The Market Evolution Program's (MEP) Market Pricing Working Group provides a forum where stakeholders can raise and discuss concerns and issues relating to price determination in the IMO-administered markets and possible options for their resolution. The working group will evaluate these concerns and issues with a goal to (i) gain a shared understanding of the issues, (ii) assemble an inventory of issues and their potential impacts on market participants and market operations, and (iii) identify and provide advice on potential solutions to specific issues.

The working group's evaluation of each pricing issue will be guided by ~~four~~five principles. These guiding principles will be used to:

- frame the discussion regarding the effects that each issue is thought to have on market participants and market operations;
- provide an objective yardstick against which the priorities of these issues can be ranked; and
- evaluate the potential benefits of proposed solutions.

The five guiding principles are listed below. There is no priority intended by the ordering of the principles. The guiding principles are a refinement of the principles adopted by the IMO Board of directors prior to market opening, to ensure consistent decisions and recommendations were made with respect to changes to the market design. The principles were refined to reflect the working group's specific focus - the price determination process in the IMO-administered markets.

Principle #1: Efficiency

Efficiency means (1) the output is produced by the cheapest suppliers, (2) it is consumed by those most willing to pay for it and (3) the right amount is produced. Efficiency also relates to efficient technology choice and timely and efficient capacity investment.

The price determination process should induce efficient outcomes. Efficient outcomes are more likely when price signals are accurate and when both suppliers and consumers can see them and are able to respond to them.

~~Prices should induce both short term (productive/allocative) efficiency as well as long term (dynamic/investment) efficiency.~~

~~In the short term, efficiency means (1) the output is produced by the cheapest suppliers, (2) it is consumed by those most willing to pay for it and (3) the right amount is produced. The price determination process works efficiently if it induces this outcome. A price that reflects the incremental social cost of producing the output generally induces the efficient outcome.~~

~~Long term efficiency has three aspects: efficient technology choice, timeliness and capacity sufficiency. In competitive markets, current and expected future prices guide the investment decisions of existing and potential suppliers as well as the consumption~~

~~decisions of customers. Efficient investment is more likely when price signals are accurate and when both suppliers and consumers can see them and are able to respond to them.~~

Principle #2: Fairness

The market should provide for open non-discriminatory access by all who meet reasonable publicly stated prudential, technical, and regulatory standards, requirements, and obligations. There should be no artificial barriers to entry or exit.

In the pricing context, there should be no artificial financial barriers that arise as a consequence of the prices and pricing structure in the market.

The price determination process should result in transfers of wealth between ~~buyers and sellers~~ stakeholders that are no more or no less than only to the extent needed to induce the efficient outcomes as described in principle 1. ~~Transfers of wealth between buyers and sellers that are not required to induce efficient outcomes should be eliminated.~~ This principle would apply to considerations of cost causality and allocation of charges for things such as ancillary service contracts.

Principle #3: Reliability

The market should promote high standards of reliability and quality of electrical service and of access to electricity.

Prices and the price determination process should facilitate reliability by providing market participants with the incentives ~~to~~ to:

~~to~~ follow dispatch instructions, ~~and~~

~~to make their facilities available when it is economic (efficient) to do so.~~

In other words, the price determination process should not produce price outcomes that induce participant actions that jeopardize the reliability of the grid.

Additionally, the IMO must have sufficient powers and flexibility to operate the IMO-administered markets and the IMO-controlled grid in a manner that best ensures reliable service to the greatest number of customers. The price determination process should not impede the IMO's ability to operate the grid in this manner. At the same time, the IMO's actions should be applied in IMO-administered markets in a manner that does not unnecessarily interfere with efficient pricing or the accuracy of price signals.

In some senses, system reliability is a classic "public good": collective investment enhances the reliability of large numbers of customers, none of whom can practically be prevented from enjoying the benefits of that investment. It is well known that purely voluntary provisions of public goods may result in too little private investment to achieve the socially efficient level of reliability. The price determination and other pricing

mechanisms should be evaluated with respect to their ability to induce long term capacity adequacy.

~~Additionally, the IMO must have sufficient powers and flexibility to operate the IMO-administered markets and the IMO-controlled grid in a manner that best ensures reliable service to the greatest number of customers. The price determination process should not impede the IMO's ability to operate the grid in this manner. At the same time, the IMO's actions should be applied in IMO-administered markets in a manner that does not unnecessarily interfere with efficient pricing or the accuracy of price signals.~~

Principle #4: Transparency

The market should be as simple and transparent as feasible and should promote timely, non-discriminatory release of non-confidential market and system information to all market participants.

The manner in which prices are determined should be as simple as practical while still being consistent with the other principles. Stating this same principle somewhat differently, market participants should be able to infer the general conditions of the market (i.e., the inputs such as offer/bid submissions, market demand and outage conditions, etc.) that caused a specific price and the prices should be consistent with what market participants would have expect under such conditions.

All actions by the IMO and the impact that these actions have on market prices should be verifiable by all market participants¹ and their impacts on market outcomes transparent.

~~Market participants~~Stakeholders should have access to market and system information necessary to enable ~~them to fulfill their licensed role~~them to take appropriate action in the market-in-the-market, to make investment decisions and to participate in the market process fairly, while recognizing the legitimate needs of market participants to protect commercially-sensitive information. The transparency of the market should also improve the incentives for efficient long-term contracting or forwarding contracting amongst private individuals by enabling them to make better forecasts of future events in the market.

Principle #5: Robustness

The market rules and protocols should be sufficiently comprehensive so as to ensure that only extraordinary circumstances can upset the functioning of the market.

The price determination process and any of the working group's recommended changes to this process should be consistent with the other guiding principles in all but the most "extraordinary

¹ It is not necessarily the case that all market participants will be able to recreate the calculation or do the calculation of price themselves, but should be able to have third party reviews of the price determination conducted at reasonable cost to the participant.

circumstances.”

Considerations for applying the guiding principles

The reality of the time and cost constraints which exist and the tensions that these constraints create with the guiding principles are extremely important considerations. As a result, "practicality and implementability" is worthy of explicit recognition when applying these principles within the groups stated objectives.

Practicality and implementability can relate to considerations that range from the mechanics of the price calculation and processes, to procedures and tools/software. The interaction with and implications of industry and public policy may also require practicality and implementability considerations.

If the working group determines that its recommendations are in conflict with enacted government policy or in conflict with anticipated future government policy ~~as can be gleaned from public government statements~~, it will clearly state the nature of this conflict in its assessment of the issue. The working group will offer recommendations for potential changes to government policy if it believes that the proposed changes are consistent with the guiding principles and are necessary to improve the Ontario electricity market. ~~If the working group believes that certain changes to government policy would be beneficial but such changes are impractical or non implementable based on the group's perception that such policies are unlikely to change, it will document this view in its report. The working group will offer alternative solutions to the issue where one exists.~~

In evaluating some pricing issues, the group may determine that two or more of the guiding principles are in conflict and that there is no clear solution to the issue that would resolve the conflict. The working group will make it clear when such a conflict exist and if the group recommends solutions to the issue, it will clearly state how it balanced the conflict.

The working group recognizes that any changes to pricing and the pricing structures within the IMO-administered markets can be significant and may involve, at times, a lengthy transition process. Through any significant and lengthy transition, consumers stakeholders may be vulnerable to sudden or unexpected changes to the market place that impact them in ways for which they would not have been able to prepare. In recognition of “practicality and implementability,” the working group will give due consideration to the transitional impacts that any recommended solutions to pricing concerns or issues would likely have on all producers and consumers with respect to reliability, price and quality of service.