

**IESO Stakeholder Advisory Committee
Minutes of Meeting
October 30, 2013, 8:30 am
St. Andrew's Conference Centre, Toronto**

Advisory Committee Members:

Mr. Todd Wilcox – Chair (representing Conveyors)
Ms. Ersilia Serafini – Vice Chair (representing Electricity Service Providers)
Mr. Jack Burkom (representing Electricity Service Providers)
Mr. David Butters (representing Generators)
Ms. Michelle Chislett (representing Generators)
Mr. Paul Ferguson (representing Conveyors)
Mr. Ted Leonard (representing IESO)
Mr. Mark Schembri (representing Consumers)
Mr. Paul Shervill (representing Electricity Service Providers)
Mr. Wayne Smith (representing Conveyors)
Mr. Tony Thoma (representing Consumers) - joined via telephone
Mr. Adam White (representing Consumers)
Mr. John Witjes (representing Consumers)

Absent:

Mr. Richard Horrobin (representing Generators)

Presenters:

Mr. Ted Leonard, IESO
Ms. Jeanette Briggs, IESO
Ms. Martine Holmsen, IESO
Mr. Scott Coe, UISOL
Mr. Kim Warren, IESO

IESO Board Members:

Mr. Tim O'Neill – Chair
Mr. Rudy Riedl – Vice Chair
Mr. David Cassivi
Ms. Angela Ferrante
Mr. Bruce Campbell
Ms. Tricia O'Malley
Ms. Helen Polatajko
Mr. John Wiersma

Agenda Item No 1: Welcome – Todd Wilcox

Mr. Wilcox welcomed and thanked everyone for attending the meeting. He then welcomed the IESO Board of Directors, members of the Stakeholder Advisory Committee (SAC) and others

who were participating via teleconference. Mr. Wilcox extended congratulations to Ms. Serafini for the Efficiency Nova Scotia's Guiding Star award won by Summerhill Group. He also acknowledged that this meeting would be the last SAC meeting for Mr. Witjes and thanked him for his contributions over the past six years as a consumer representative as well as his leadership as Chair for the past four years.

Mr. Wilcox then invited everyone on the phone and in the room to participate in the meeting and to share their knowledge and experiences.

Agenda Item No 2: IESO Senior Management Update (Ted Leonard)

- Report on current and upcoming stakeholder engagements
http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-Report_current_upcoming_SE.pdf
- IESO Business Plan Submission (verbal update)
- General Conduct Rule (SE-112) (Member Request Item)
http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-General_Conduct_Rule_update.pdf

Mr. Leonard announced that the 2014-2016 Business Plan was approved by the Minister of Energy and that the IESO will shortly file it with the Ontario Energy Board (OEB). He thanked the SAC and stakeholders for their input and invited stakeholders to intervene through the OEB process. He highlighted one key change which is the proposed change to how the IESO fee calculation is applied. He recognized that this issue has been brought to the SAC in the past and that Ms. Briggs would present on the topic in the next agenda item.

He made note that the SE-91: Renewable Integration Initiative is coming to a close and thanked stakeholders for their effort on this long standing engagement and invited stakeholders to comment on the process. He added that the IESO values the feedback received on all stakeholder activities at the end of each engagement.

He provided an update on the SE-112: General Conduct Rule timelines; that stakeholder feedback was due October 25 and the IESO is now reviewing the feedback received and will post responses by November 7. The next meeting will be scheduled for the end of November.

Lastly, he reminded participants that the 2014 Stakeholder Summit will be held on February 11, 2014. A hold-the-date email was sent and registration will be open within the next couple of weeks. He asked that everyone please hold the date and urged early registration because it sold out quickly last year.

Mr. Butters raised a question on the SE-112: General Conduct Rule to ensure that the meeting at the end of November will address all of the comments and questions brought forward. He noted that the generators have been concerned about governance of the proposed general conduct rule and explained that opposition coming from the generators is not around the

concept of the rule, as it is viewed that this could be helpful to the market, but noted that governance will influence the way that the rule evolves. He encouraged the IESO to address this issue directly.

Mr. Leonard noted that the IESO has committed to respond to stakeholder feedback by November 7.

Mr. Wilcox asked Mr. Butters to explain the views of generators with respect to the General Conduct Rule (SE-112) stakeholder engagement for those who are not familiar with their position.

Mr. Butters explained that generators believe that the IESO does not have the authority to be the investigator and the arbiter in matters under a general conduct rule and suggested that the OEB should be the arbiter from an equity and fairness perspective. He noted that this appears to be a significant difference of opinion, so it has to be properly addressed before moving on with the proposed Market Rule change.

Mr. Leonard agreed that Mr. Butter's characterization is fair in terms of a difference of opinions and noted that the IESO does not agree with the notion that the difference of opinion needs to be resolved for the stakeholder engagement process to move forward. He re-iterated the IESO's commitment to a response by November 7 and confirmed that the IESO Board of Directors indicated that it wished to continue to move forward toward the development of a general conduct rule.

Ms. Chislett requested on behalf of the renewable generators that IESO staff be available with the closing of SE-91: Renewable Integration Initiative to address further transition issues around renewable integration until the end of the year.

Mr. Leonard indicated that even though the project has been disbanded, IESO staff would still be available for future assistance and that the IESO will follow-up with Ms. Chislett to discuss this.

A comment from the floor wished to emphasize Ms. Chislett's point. He agreed that there are outstanding questions relating to issues around variable generation forecasting and that there is still a need for IESO staff with the right expertise to resolve these issues. He also raised concern around the IESO concluding engagements with outstanding stakeholder issues and suggested that the IESO should consult with stakeholders first to see if all of their issues have been resolved first.

Mr. Thoma asked what the mechanism is for capturing conversations and feedback from stakeholders with respect to the SE-112: General Conduct Rule and how can stakeholders get a better understanding of the different viewpoints.

Mr. Leonard clarified that all the comments received along with the IESO responses are published on the IESO website and that further discussions with stakeholders are held during meetings under this engagement activity.

Mr. Thoma inquired if it would be acceptable to reach out to stakeholders who submit feedback into the SE 112: General Conduct Rule process to try to build this understanding.

Mr. Butters replied he would welcome a discussion and **Mr. Wilcox** offered this as an updated item at the next SAC meeting.

No further questions were asked.

Agenda Item No 3: Proposed Changes to IESO Fee Calculation (Jeannette Briggs)

Ms. Briggs, Director, Corporate Planning, presented on the proposed changes to the IESO fee calculation that was put forth in the 2014-2016 Business Plan. The presentation is posted at: http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-Proposed_Changes_to_IESO_Fee_Calculation.pdf

Ms. Briggs noted that there were multiple questions on the proposed change to the user fee determinant following the presentation on the Business Plan at the August SAC meeting and wanted to address those questions and explain the IESO's proposal in more detail. In her presentation, Ms. Briggs explained that currently, the IESO calculates its user fee by taking the revenue requirement and dividing it by the forecast demand for Ontario plus exports. She acknowledged that there are other elements such as line losses, but at a high level those are the components of the fee calculation. The proposed change also adds embedded generation into the denominator.

She noted that the proposed change is revenue neutral to the IESO and to local distribution companies (LDCs). Currently, LDCs collect the IESO user fee from their customers based on the LDCs gross demand. The LDCs, in turn, remit the IESO user fee to the IESO based on the LDC's net demand (not including embedded generation). The difference in what LDCs collect from their customers and what is remitted to the IESO is accounted for under the Wholesale Market Service Charge variance account (1580). She explained that the IESO is suggesting that the IESO user fee include the embedded generation in its calculation in order to minimize the variance accumulated from this charge and added that the variance amounts are governed by the OEB. When the variance account reaches a certain level it is remitted back to the customers through the LDC delivery rate.

Ms. Briggs said that this change aligns with the fairness principles that the fee was founded on before there were large amounts of embedded generation in Ontario. LDCs with larger amounts of embedded generation in their territory are advantaged over LDC customers in territories with little embedded generation because there is more money in their variance account to give back to their customers in their fee. The principle is that if generation is

connected to the transmission or the distribution system, it is still part of the IESO controlled grid and all customers should pay the IESO fee equally. Examples were provided in the presentation to demonstrate the calculation.

A comment from the floor noted that the OEB has a Direct Benefits Framework where the LDCs do not actually keep the variance. The default scenario is that 82 per cent of the variance account goes back to all Ontario ratepayers – and only 18 per cent is remitted back to the LDC's customer base. He asked if Ms. Briggs could highlight how the IESO proposed change would differ from the current way the OEB has it set up.

Ms. Briggs explained that her understanding is the difference in the net versus gross collection of the IESO fee due to embedded generation is held in the LDC's variance account (1580) and is later cleared into the LDC rate for the benefit of their own customer base and not to Ontario customers in its entirety. The proposed change to the IESO user fee calculation would spread across all Ontario customers. She also noted that her understanding was that there are other amounts going into the variance account and that this change would not impact the Direct Benefits Framework established by the OEB - the proposed change deals specifically with the IESO user fee portion. The change aligns with the way the IESO fee was intended to operate and that the full amount of the fee collected by LDCs should be remitted to the IESO so that it is equally shared by all ratepayers.

A comment from the floor went on to explain that the Direct Benefits Framework results in a large portion of the variance accounts being redistributed to all Ontario ratepayers. LDCs can apply for different rates, but the default rate is that 82 per cent going back to all provincial rate payers. The commentator pointed out that the 18 per cent that remitted back to the LDC's customer base accounts for other factors such as early asset replacement that are bore by the LDC customer base.

Ms. Briggs reiterated that the IESO is not suggesting changing the incentive, but is simply proposing that the IESO fee portion be reallocated to move back to the way that the IESO fee was intended to be collected – that all customers across Ontario would pay the same IESO fee.

Mr. Smith agreed that the proposed change would be revenue neutral for the LDCs. However, embedded generation is a cost burden on the LDC and it is not fully recovered from the generator proponent. Customers have to pay the costs of the LDC operating and maintaining that connection to the generator. The cost burden is unique to those customers with that embedded generation. OEB has a holistic view and it is important to look at the burden on the customer. He welcomed the dialogue that will take place through the OEB process.

Ms. Briggs responded by ensuring that the IESO is not suggesting that LDC rate case filings would be impacted by this. It is simply that the IESO is taking a stance on how its fee is collected and remitted. The IESO is also not weighing in on what the impact of embedded generation might be from one LDC to another.

Mr. Wilcox asked when this change would take effect.

Ms. Briggs answered that it would take effect as of January 1, 2014. While the OEB process to approve the fees case will likely not be concluded by January, it would be applied retroactively once approved.

Mr. Wilcox requested clarification on the definition of 'behind the meter'. He noted that the presentation (slide two) states that the proposed change does not include generation behind the meter and asked how this impacts customer with a Feed-In Tariff (FIT) contract.

Ms. Briggs clarified that generation behind the meter is not under FIT contract. Generation behind the meter is considered self generation that is not connected to the distribution grid.

A question from the floor asked how the proposed change would impact customers that are directly connected to the transmission system. He wondered if they would pay the same amount or more.

Ms. Briggs pointed out that the IESO required revenue would remain the same, but the denominator for calculating the IESO user fee would be increased. As a result the fee would be slightly less for all customers.

Mr. Ferguson offered an explanation on what it would mean for customers connected to the transmission system if the current calculation is taken to an extreme. An LDC with enough embedded generation to make its net load zero would collect a full IESO fee, but remit nothing. This would create a revenue deficiency for the IESO and the fee would have to be raised to make up for that shortfall. The customer that is directly connected to the transmission system will be impacted the most if that happens. He took the position that if the gross amount is being collected for the IESO fee, then it is only fair that the gross amount is remitted as the IESO fee.

A further comment from the floor asked Mr. Ferguson to confirm if his position was that he agreed with Ms. Briggs that the directly connected customer will pay less but that it is a fair outcome in his opinion.

Mr. Ferguson affirmed that it is fair in that the directly connected customer is treated the same after the implementation of the Green Energy Act and the FIT and micro-FIT programs as they were before. They should not be adversely impacted in terms of the IESO fee.

There were no more questions.

Agenda Item No 4: Market Development (Ted Leonard)

Mr. Leonard, Vice President Markets and CFO, presented the stakeholder engagement work that the IESO has recently undertaken to support IESO market development planning and

asked the Committee to provide input on the proposed stakeholder engagement approach for establishing a Market Development Plan.

The presentation is posted at: http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-Market_Development.pdf

Mr. Leonard began with thanking stakeholders for their input in the various engagement initiatives and emphasized that the dialogue with stakeholders has been valuable. He added that there will be a lot more work with stakeholders in the future, and took the opportunity to thank stakeholders.

He noted that stakeholders have been asking how all of the IESO engagements fit together and responded that this broader stakeholder initiative will be a part of the answer to that question and that this presentation represents the start of the pre-consultation phase of the Market Development Plan. The IESO believes that there are opportunities to improve price signals and better use the investments that already exist in Ontario. The market must also develop in a technology agnostic way. This is something that has been brought forward from stakeholders through the Market Forum and from the SAC.

Mr. Leonard explained that the SAC provides stakeholder input into the IESO's annual business planning process. It is here where stakeholders identified priorities to support the evolution of the market, improvement of price signals and reducing barriers to participating in the electricity market. Stakeholder engagement activities such as the Hourly Ontario Electricity Price (HOEP) Review, Electricity Market Pricing and Transmission Rights Markets will support the market development planning. In addition, Mr. Leonard pointed out that the IESO is undertaking a 10 MW project for regulation services and one of the objectives is to get a better understanding of some of the barriers faced in the market. He also noted that the IESO is looking at how to introduce demand response into the market in order to treat it on an equal footing with other technologies and believes that there is a lot of opportunity to do so. Lastly, the IESO recently released a report on more frequent intertie scheduling. All of these initiatives will feed into the Market Development Plan. The objective is to create a stakeholder-developed long-term holistic plan that provides clarity on the future direction of Ontario's electricity market. Mr. Leonard emphasized that all of the reviews that the IESO undertakes need to be guided by the principle of exploring opportunities for better pricing and more efficient use and that the cost-benefit analysis is done before any significant investment takes place.

Mr. Leonard provided a list of the market reviews recently undertaken and noted that the Global Adjustment (GA) review was not listed. He explained that any changes to the GA are outside of the IESO purview. All reviews listed are active with the exception of the HOEP review. The market reviews are designed to do two things: (1) identify potential opportunities and provide analysis and (2) find opportunities that can be implemented in the immediate term.

He said the IESO has heard from stakeholders that it is important that the IESO not be in a perpetual state of planning. The Market Development Plan is not a new concept, but it will provide a better stakeholder-involved structure so that the IESO can look out over a number of years and continue to prioritize the evolution of market design. As the Market Development Plan is formulated the IESO will continue to see stakeholder support and input on the priority, scope, timing and dependencies of various initiatives. The IESO is bringing this to the SAC at this time to ask how the members would like to be involved in the stakeholder process.

Mr. Wilcox asked the SAC members to provide comment.

Mr. Shervill began by saying that the SAC is an appropriate body to provide feedback and that he has reached out to his constituents and will report back any additional views on market development. With respect to the objectives, he said that the presentation hit the right notes. While priorities come out of the Market Forum and the SAC, government policy is also something that is clearly an influencing factor. He provided the Conservation First policy, and the Long Term Energy Plan as examples of government direction that should be considered in the Market Development Plan. As noted, he was in the middle of discussion with his constituents and would relay any additional information to the IESO.

Mr. Ferguson noted that when the initial work with the Market Forum began, most of the SAC members were involved in that discussion. He noted that the newly formed OPA stakeholder committee should be engaged in this discussion as there are a lot of linkages between OPA and IESO priorities. In terms of objectives and finding efficiencies in the existing market, Mr. Ferguson stated that based on the work that the IESO has already done he suggested that there are not many inefficiencies left. He believes that the government direction is clear in that there will be no new generation built and that conservation and demand response are priorities. Mr. Ferguson suggested that IESO should be the first consideration for any of these initiatives because a market based solution(s) would yield better results and believes that conservation and demand response are not happening at the level that the government wants it to happen. He further believes that a market solution is much more efficient and transparent and encouraged the IESO and others to reach out to the government to have this dialogue. With respect to pilots and studies, he suggested that the IESO, the OPA, LDCs and others create a catalogue that includes the status of each initiative and what is being produced and stated that it is difficult to know what is happening across the sector and it is important to have this understanding in order to inform the Plan.

Mr. Schembri agreed that the SAC is an appropriate body to feed into the Plan and that the OPA's new stakeholder committee should also be involved. He encouraged a focus on opportunities for demand side market solutions and suggested aligning agency support by sector to mitigate conflicting roles between IESO, OPA and LDCs. He supported conservation efforts and aligning initiatives with system needs and encouraged simplification where possible. Lastly, he recommended reviewing what is happening in other markets around the world.

Mr. Witjes said that the IESO is the appropriate organization to develop this Plan. He was encouraged that the Plan would provide a better understanding of where the market is headed which, from a consumer perspective, will help with investment decisions. To have visibility into the future means that consumers will be more equipped to manage costs and make strategic investments. Guiding principles should include transparency, market efficiency and keeping costs reasonable for consumers which is imperative.

Mr. Burkom indicated that his constituency is broadly supportive of IESO initiatives to bring further efficiency and market based solutions in Ontario. He believes that there is not enough clarity around how all of the initiatives that the IESO is leading tie together, so his constituency would be happy to hear that the stakeholder efforts for the Plan are now underway. He encouraged a robust stakeholder process and agreed that the SAC should be involved, but not as the main body to consult. The main body could be the Market Forum or a different group using that model. With respect to principles, he emphasized transparency and efficiency and agreed that market solutions should be a priority and that equitable solutions should be sought. Conservation and demand response should be pursued if they are cost effective in a market context. All of the regulatory and commercial considerations should be scoped up front. The IESO's Renewable Integration Initiative (SE-91) was an example of where early scoping of these issues could have resulted in a smoother process. As stakeholders try to make decisions and participate in engagements, it is important that robust studies and information is provided early on in the process to facilitate informed participation.

Mr. White agreed that the SAC is an appropriate body and noted that regardless of how the stakeholder process is structured, that SAC members who want to be involved will participate. He also cautioned against using a sub-committees because of the increased workload it usually brings for participants. He flagged that the objectives and principles are already identified and most of this work is already underway. With respect to Mr. Leonard's point on a perpetual state of planning, Mr. White offered that plans are only a snapshot in time, so planning is a continuous process. He noted that the Electricity Market Forum Report was completed a year and a half ago and the IESO is doing what it said it would do. It is the longer-term time horizon that needs to be focused on once engagements like the two schedule system are complete and the outcomes are known. The government's Long Term Energy Plan will also provide context. The IESO is in the position and has the capacity to lead on these files, but cautions that empowerment that can only be gained through stakeholder support. He encouraged the IESO to structure the Plan in a 3, 5 and 10 year framework.

Ms. Chislett added that participation from the generator segment and more specifically the renewable generator segment might benefit from a sub-committee approach. While sub-committees can be more work, this segment has a lot of questions and needs support in understanding what the ongoing initiatives mean for their business. It is not until this clarity is gained that meaningful input can be provided. Ms. Chislett proposed a sub-committee with

IESO presence so that this segment can better understand all of the initiatives and can be better prepared to engage.

Mr. Butters explained that the challenge in responding is that all of the pieces are there, but IESO intentions are still vague and it is unclear where the IESO sees efficiencies. He indicated that more information is required. The initiatives touch upon important commercial, regulatory and political issues, so it is difficult to respond unless the IESO communicates the already identified efficiencies. He agreed that the SAC is one body to discuss the Plan with, but in order to get meaningful feedback on detailed commercial and technical issues a dialogue needs to take place with the appropriate experts. In his opinion the objectives are not yet clear enough to comment. A robust stakeholder engagement process is imperative and IESO stakeholder principles must also be upheld. Also, fairness and equitability need to be measured and a principle of no harm should be included. He reiterated that the IESO should be the leader, but that leadership is bestowed upon the IESO by stakeholders. Finally, he cautioned against spending too much effort to find micro efficiencies.

Mr. Smith agreed that the SAC is the right venue for this consultation, but that others also need to be engaged. He noted that a transmitter will tend to stay on the sidelines and remain neutral. The reality is that there are limitations in the transmission system and it is not economic to address all of them. Furthermore, transmission equipment is taken out of service approximately 20,000 times a year and it impacts the whole market. For example, if an intertie is out with Quebec or New York is taken out of service it could impact HOEP and transmitters work with market participants to minimize this impact. In terms of design of market rules and in terms of how they interact with OPA contracts, it could make it easier or harder and the impact of the transmitter could become greater or smaller. While the role of the transmitter should be on the sideline of market design, transmitters are paying close attention to how changes to the market interact with OPA contracts and impacts on the maintenance and growth of the grid.

Ms. Serafini indicated that she had not yet broadly engaged her constituents. The comments that she provided were her own and she planned to consult following the meeting. She largely agreed with the comments of the other SAC members. She explained that in order to discuss principles, there is a need to understand the purpose and product(s). This should be regarded as a critical first step, before a discussion about who needs to be consulted. The role of government will also have an impact. She also agreed that roles and responsibilities in the sector needed to be clearly articulated. She agreed that the efficiency, cost-benefit analysis and using market solutions versus contracted solutions should be core principles.

Mr. Wilcox added that from his perspective timing and need for results has not been addressed. It is important to remain aware that there are customers in Ontario that are struggling with electricity costs. For example, an industrial customer met with Mr. Wilcox recently and shared that its electricity bill increased from \$1.6 million about two years ago to a projected \$2.6 million for next year. This customer is trying to compete with other jurisdictions and is looking for solutions. After surveying the facility for energy efficiency opportunities Mr. Wilcox found that

the cost effective measures that could be implemented would only save \$50,000. The only other cost-effective alternative for this customer was to install a generator. He attested that a customer should not have to install a generator to stay in business in Ontario. Customers are struggling to try to stay in the province, so any practical solutions for customers need to come fairly quickly. Furthermore, solutions need to be simple.

There were no further comments.

Mr. Leonard thanked the SAC for their feedback and invited ongoing input.

15 min break

Agenda Item No 5: IESO Website Redesign (Martine Holmsen)

Ms. Holmsen, Manager Communications, provided an overview of the new IESO website. She stated that the goals for the website redesign are to ensure that the site is better suited to meet the increasing needs of all stakeholders. Before undertaking the redesign, the IESO took four steps to ensure that there was a clear understanding of stakeholder needs and interests. A web audit was conducted, website traffic was analyzed, IESO Customer Relations department was consulted and feedback from the Market Information Focus Group was collected. She then demonstrated the new home page, power data and stakeholder engagement sections of the website. She explained that the new design will meet legislated accessibility standards and provide users with streamlined access to the information and data. At the end of her presentation she handed out an infographic on how change happens at the IESO with respect to engagements, decisions and implementation.

A question from the floor asked if, in the power data charts which allow some data comparisons, it was possible to compare data from this month with the same month last year.

Ms. Holmsen responded that when the website is launched, chart comparisons will only be possible for seven day periods, but that this type of flexibility is something that the IESO will continue to try to achieve.

A question from the floor inquired if the IESO would maintain all of the archives on the website?

Ms. Holmsen responded that the power data page provides the easiest way to access the latest data, but the data archive has not been changed at all. All of the reports will remain the same and will be available on the website.

A comment from the floor explained that companies and some service providers scrape data off of the website and then massage it into a format that market participants need. It was asked if there will there be any issues with doing this in the future and if the changes would be communicated broadly.

Ms. Holmsen answered that scraping should be done on the report site which is not being touched. There will be a communication effort to let stakeholders know about the changes and to remind that scraping should only be done from the report site.

Ms. Serafini extended congratulations and acknowledged that a website redesign is a huge amount of work. She noted that the new site looks tremendous and the logic flow has improved considerably.

Mr. Ferguson asked if there will be the ability to show HOEP and Global Adjustment on the same graph?

Ms. Holmsen indicated that this information will be there.

There were no further questions.

Agenda Item No 6: Demand Response Overview (Scott Coe)

Scott Coe, Vice President, UISOL presented what demand side resources can do for the market as an energy product, reserve/emergency product and a regulation product and on the various approaches in United States ISO's. This presentation was organized as an educational opportunity for the SAC and others in attendance at the meeting. The presentation is posted at: http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-Demand_Response_updated.pdf

Mr. Schembri asked if any of the ISOs that he is familiar with allow for weather correction of the baseline.

Mr. Coe answered that weather correction is common and it makes sense for a more accurate depiction.

Mr. White asked if there are examples of markets that operate beyond two days and three days out and if there is more uncertainty and risk with this design. In the Ontario context, there is a lot of variation in demand and weather, also renewable generation is significant enough that it is impacting load shape. Are there tools to manage the two and three day out risks?

Mr. Coe answered that there are examples of a few years out and a day ahead, but that he is unaware of any that operate more than a day ahead. From a pure economics perspective, bids should be reflective of what the lost opportunity cost is. In theory, it should be possible to look at bidding history to understand what a participant's threshold is, take into account weather variation and come up with what the potential for demand response is. Mr. Coe added the first step is to define the unique problem upfront and then it is possible to define the demand response (DR) product around the problem. The product can be designed in many ways. There are no rules around what you can and cannot do.

Mr. Schembri asked if there are any programs that promote additional consumption at periods.

Mr. Coe answered that there are not any examples that he could offer.

Mr. Wilcox asked what the value proposition for the customer is.

Mr. Coe explained that emergency resources may not be called on for years, so there is an annual payment for being there even if the resource is not called on. With respect to economic programs, the customer has to look at what it would cost to be shut down and do the cost benefit analysis. For emergency programs there is also a socially responsibly aspect.

Mr. Schembri asked if there is any aggregate analysis that reviews the contracted hours versus called-on hours.

Mr. Coe explained that it depends on the type of program and program design elements. Under contracted programs there is a limit and most ISOs tend to be below it. With economic programs it is up to the participant to define through the bidding process. A participant can simply bid higher if they are being called upon too much. Energy retailer demand response products operate differently because a retailer will save money every time a participant is called upon. This changes the profit motive and it is likely that there will be a maximization of a product.

A comment from the floor mentioned that they were aware of some regulatory issues that FERC has pursued with respect to baseline. For example, there was a demand response activation planned in Maryland and one participant turned on equipment in advance so that their starting baseline for the activation would be higher, causing them to get a more lucrative payment. They got caught, had to pay it back the money and were fined. How can program design help with this?

Mr. Coe offered that there is a need to monitor participants. There will be gaming and it is important to communicate that there is a monitoring process upfront to create a disincentive. There is explicit gaming and it is important to make examples of it when it happens. However implicit gaming, which is activity that is done over a normal course of business that results in an increase of profit, can be managed through program design. For example, it makes sense for a participant to precool a building before an event because it may require shutting off the air conditioning, but that would increase the participant's baseline. The program design solution is to remove the hour before the event from the settlement calculation. There is no perfect settlement solution, but the net social benefit usually outweighs small settlement inaccuracies.

A comment from the floor noted that in the markets that Mr. Coe is speaking of, the default cost of electricity to customers is a retail price as opposed to a floating wholesale price. How do you

translate those things into the Ontario context where the fixed retail price only applies to the smallest of customers?

Mr. Coe explained that he is optimistic that you can leapfrog some of these programs into a much more demand side market. Ontario has some abilities that all of the other markets do not have such as advanced metering.

There were no further questions.

Agenda Item No 7: Renewable Integration (Kim Warren)

Kim Warren, Chief Operating Officer & Vice President, provided an update on renewable integration. The presentation provided an overview of the new information that is visible to the IESO Control Room with respect to variable generation. An explanation of progress on variable generation forecasting was provided. Finally, Mr. Warren offered a breakdown of the frequency and amount of wind dispatch for economic reasons versus surplus baseload generation (SBG) reasons.

Mr. Warren made note of two occasions where the ability to dispatch wind proved incredibly valuable to the system. On two weekends in September, wind generators were maneuvered in order to prevent the need for a nuclear generator shutdown. The project to implement wind dispatch cost just over \$7 million dollars and a nuclear shut down costs about half that amount, so wind dispatch has already paid for itself. As wind capacity on the system increases over the next few years, this capability will increase and provide even more value to the system.

The presentation is posted at: http://www.ieso.ca/imoweb/pubs/consult/sac/sac-20131030-Renewable_Integration_Initiative.pdf

A question from the floor asked to explain how much of the wind curtailment was economic dispatch and how much was constrained off?

Mr. Warren explained that 90 per cent of the time wind fleet was allowed to generate. One per cent of the time it was curtailed because of an Ontario wide market over supply and 8 per cent of the time wind was curtailed for regional constraint issues. He noted that 8 per cent is an Ontario wide percentage. If it was broken down regionally the percentage could be quite a bit bigger or smaller by region.

Another question from the floor asked for clarification was wind was economically dispatched off within the locational field?

Mr. Warren answered yes, within the floor-prices framework.

Mr. Warren addressed the close off of the Renewable Integration Initiative. Early in the initiative, the IESO was very transparent about the fact that it would be closed off and that the project team would be re-integrated into IESO business units. He provided assurance that there would still be ways to work with stakeholders and to have a dialogue on issues and concerns. He acknowledged that there would be years of work ahead that will require working together and offered the option to establish a working group if the sector wants one.

Mr. Burkom asked how the wind fleet has performed when generators were called upon.

Mr. Warren indicated that wind generators were performing well with the exception of a few growing pains.

Mr. Burkom commented that the dispatches have been in surplus or local constraint conditions. Since wind is potentially the fastest moving resource on the grid he asked if wind would be used in a positive price scenario because of their ability to move quickly?

Mr. Warren answered that it is possible, but unlikely. Wind generators are contracted facilities and it is likely that they will want to generate. If a wind generator wants to participate in those scenarios it will have to compete.

Mr. Warren recognized that there has been aggressive timelines and paths. He expressed that the IESO appreciates the efforts of the wind and solar facilities, as well as all of the other market participants that have contributed. He assured that the dialogue is not coming to an end with the close-out of the Renewable Integration Initiative.

A comment from the floor indicated that this is the first time that public wind dispatch information has been provided and encouraged more of it on an ongoing basis. Is the IESO anticipating using wind for broader operability issues as wind resources on the grid grows?

Mr. Warren replied that it is valuable regardless of where it ended up in terms of economic operability. The Ontario market needed wind dispatch for grid reliability and this will become more apparent as the resource grows.

Mr. Wilcox commented on how much the market has changed.

Mr. Warren agreed.

There were no other questions.

Agenda Item No 8: Other Business

Mr. Ferguson asked Mr. Campbell if the IESO was consulted by the government before the decision to take nuclear options off of the table and to close Lambton early were made.

Mr. Campbell replied yes.

There was no other business arising.

Agenda Item No 9: Wrap up

Mr. Wilcox thanked those attending. The meeting was adjourned at 11:53.