Appendix 1

#	Commented as	Respondent	Comment Detail	Relates to: Principle, Detailed Design or Other	Accountability	IESO Response
1	Principle (1 to 11)	TransAlta Corporation	TransAlta recognises that in order to meet the government of Ontario's goals for renewable generation and the anticipated increase in the number of renewable generating facilities expected in Ontario, new market rules and regulations, such as those proposed, will be necessary in order to ensure adequate control and reliability of the Ontario electricity transmission system.	Principle	IESO	Statement
2	Principle (1 to 11)	SunEdison	Principles lack clarity with respect to the treatment of solar resources.	Principle	IESO	See Common Theme Q3
3	Principle (1 to 11)	CanWEA	CanWEA is conceptually supportive of the Design Principles and the direction IESO has taken in this regard. The process to integrate more variable sources of electricity into the existing electricity grid will require operational and policy rule changes.	Principle	IESO	Statement
4	Principle (1 to 11)	Ontario Power Generation	In general, OPG is in agreement with the eleven design principles as outlined	Principle	IESO	Statement
5	Principle (1 to 11)	Invenergy Wind Canada	Invenergy is supportive of the Principles outlined in the December 9, 2010 whitepaper. These principles are similar to efforts underway by other North American ISO/RTOs and will enhance reliability and system operation efficiency.	Principle	IESO	Statement
6	Principle 1	Power Advisory LLC	For purposes of the proposed centralized forecast for energy generated from wind resources, why has a 5 MW lower threshold been proposed for inclusion of affected generation? The Consortium supports IESO centralized forecasts but wishes to better understand to what extend the IESO will forecast generation output for distribution-connection generation facilities.	Principle	IESO	See answers to Specific Comments
7	Principle 1	Power Advisory LLC	Considering approximately 1,000 MW of ground-mount solar PV generation projects are under OPA contracts, with most projects sized at 10 MW, why are these resources not being addressed through some central forecasting tools at this time? This point applies for other draft Principles. If IESO centralized forecasts for energy output from solar PV generation is not developed in parallel to centralized forecasts for energy output from wind generation, what is the potential timeline for the IESO to develop such forecasts?	Principle	IESO	See Common Theme Q3
8	Principle 1	Power Advisory LLC	Has the IESO sourced potential forecasting tools? The IESO should convey what forecasting tools are used in other jurisdictions in order to facilitate appropriate consultation and feedback from stakeholders.	Detailed Design	IESO	See Common Theme Q1
9	Principle 1	Power Advisory LLC	The goal of forecasting output from wind generation is to forecast the energy or power, not the wind speed, and this requires understanding of the relationship between the power output and weather patterns, with additional local meteorological data being potentially interesting but of minor value for advanced power forecasting methods. Accordingly, while wind generators should provide certain data to the forecast developer (i.e., the IESO), in order to help produce more accurate forecasts, meteorological forecasting providers need not impose unnecessary costs on wind generators by requiring unnecessarily detailed data (e.g., multiple met towers, data from each turbine or from a string of turbines).	Detailed Design	IESO	See Common Theme Q1, Q10 and Q12

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10	Principle 1	Power Advisory LLC	Wind generators should also be permitted to continue producing and using their own forecasts based on the data they obtain and their chosen methodologies. A generator may believe it can produce a more accurate, site-specific forecast than the centralized forecast, and may wish to use this forecast to schedule its energy output.	Principle	IESO	See Common Theme Q9
11	Principle 1	SunEdison	Supports implementation of centralized forecasting for variable resources	Principle	IESO	Statement
12	Principle 1	Robert Cary & Associates Inc	To what extent will the IESO expand the forecasting beyond the day ahead for use in SAA reports and near term outage evaluation?	Detailed Design	IESO	See answers to Specific Comments
13	Principle 1	CanWEA	One of our major concerns is with respect to the requirement for installing meteorological towers within 5 km of every wind turbine in any given project. This may be problematic for previously approved, commissioned or currently operating projects. As these towers are retro-fits the problem is with siting, permitting and land optioning. It would become problematic for existing projects to locate, in any meaningful manner, tower locations after the bulk of the design is done. It is our opinion that requiring a met tower within 5km of every turbine would not necessarily greatly improve the quality of generation forecasting over having a better satellite, weather radar and synoptic observation station network. For identifying local wind conditions, wind flow unimpeded by turbines is required. As these tower locations are being added after the project design process is nearly complete, it could be very difficult to site permanent meteorological towers to give useful results. Furthermore, each meteorological tower typically adds $300,000 to the capital cost of the project, and requires additional lease agreements. A better large-scale input network would likely improve the quality of the forecasting over an increase in the number of permanent met towers far better than increased quality/quantity of data at the site.	Detailed Design	IESO	See Common Theme Q10 and Q12
14	Principle 1	CanWEA	We respectfully submit that the IESO had previously suggested at SE-57 meetings that one met tower would be required per project, while the new principles typically increase this number to 3-5 for large projects. In addition, these would be subject to permitting under the Renewable Energy Approvals process. For many developers, the REA process is well advanced, and permitting these towers would require an amendment. This in turn might delay commercial operation.	Detailed Design	IESO	See Common Theme Q10
15	Principle 1	CanWEA	With respect to smaller projects, will the IESO consider aggregating those smaller projects together and place meteorological towers such that this requirement can be met for the aggregated wind farms (cost sharing approach)	Detailed Design	IESO	See Common Theme Q10 and Q12
16	Principle 1	Brookfield Renewable Power	Since weather forecast are limited in scope and accuracy (especially beyond 1-day), we would prefer that the IESO allow each MP an option of supplying its own forecast schedule for comparison purposes in order to ensure the most accurate forecast is being utilized, similar to what is done in ERCOT. If the IESO's forecast is less than what the facility is actually generating, the IESO shall respect the intermittent nature of these facilities and IESO forecast shall default to the MP forecast if it proves more accurate. In addition, we assume that 5 minute forecasts will utilize persistence forecasting.	Principle	IESO	See Common Theme Q9

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17	Principle 1	Parker Gallant	The mentality of the public electricity sector for some reason sees ratepayers as bottomless pits that are available to pay the costs of unproven and experimental ideas that have resulted from the passing of the GEEA. I would ask the IESO if they are able to point to any jurisdiction that currently has in place a “forecasting” system as envisaged by IESO and further to advise on the success of the forecasting when compared to the jurisdiction's (ie; in Canada that would be Environment Canada) weather forecasting abilities?	Principle	IESO	See Common Theme Q1
18	Principle 2	Power Advisory LLC	This principle implies that forecasts will lead to schedules applicable to variable energy generators. Will schedules based on forecasts be used in any way to settle variable generation (either within the IESO-Administered Markets and/or applicable OPA contracts)? To the extent that schedules based on forecasts are used for settlement purposes within the IESO-Administered Markets and/or OPA contracts, any such schedules should nevertheless be secondary to actual energy production so that the result is no lost revenue to the applicable generation facilities. Therefore, the Consortium proposes additional language to this principle stating that, “A real-time forecast will provide the information to allow for schedules and renewable dispatch, and OPA contract settlement will not result in lost revenue for applicable generators.”	Principle and Detailed Design	IESO and OPA	See answers to Specific Comments
19	Principle 2	Power Advisory LLC	Within other wholesale electricity markets, how are variable generators being dispatched (i.e., forecasts, scheduled production, etc.) and on what frequency (e.g., hourly, 15-minute intervals, 5-minute intervals, etc.)? The IESO should provide a comparison of variable generation dispatch from other jurisdictions.	Detailed Design	IESO	See Common Theme Q1 and Q2
20	Principle 2	Power Advisory LLC	Energy from wind generation inevitably has some inherent variability from its forecasted schedule that is based not on the operation of the generator itself, but on the implicit nature of the weather. Intra-hour scheduling would help increase efficient integration of generation because weather characteristics tend to change less over the coming minutes as compared with the future hours. Shorter scheduling intervals would also accommodate anticipated changes in load, and help manage and lower overall system costs by reducing the amount of reserves that must be procured. This interval should reflect technical capabilities, not mere custom or prior practice.	Principle and Detailed Design	IESO	Thanks for comment
21	Principle 2	SunEdison	Supports real time forecasts that will provide information for renewables dispatch and OPA contract settlement	Principle	IESO	Statement
22	Principle 2	Robert Cary & Associates Inc	We have a strong interest in the implementation details of this principle. How will the IESO integrate the “forecasts” into persistence based dispatch? How does the IESO propose that its persistence based normal dispatch should not preclude the normal wind-following output of each part-load turbine under normal conditions? How does the generator know when a dispatch is due to a meaningful constraint, and when it is merely an artefact of the persistence based tool? Maybe the IESO needs to establish a “wind dispatch operating state” analogous the high-risk or emergency operating states that it can presently declare.	Detailed Design	IESO	See Common Theme Q2

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23	Principle 2	Northland Power Inc	The generators meteorological tower installation quantity, operation and performance requirements may not completely align with what is required by the IESO. As a result, the IESO must balance the need for information with the increased cost to the generator. Also please be aware that meteorological tower reliability is often hindered by weather conditions such as ice, lightning etc.	Detailed Design	IESO	See Common Theme Q10 and Q12
24	Principle 2	Brookfield Renewable Power	Additional data will be required to provide the IESO and OPA adequate information for dispatch and settlement purposes, such as resource technical capabilities (i.e. ramp rates, rough zones, minimum run caps, etc) wind farm MW telemetry, dispatch workstation and MP forecast data.	Detailed Design	IESO	Statement
25	Principle 3	Power Advisory LLC	The Consortium supports this principle.	Principle	IESO	Statement
26	Principle 3	TransAlta Corporation	We agree that the costs of the centralized forecasting system should be recovered from consumers who ultimately benefit from accurate generation forecasting. However, we do have a concern regarding the cost of installing/retro-fittings any additional met towers,telecommunication equipment etc. Consideration should be given to ensuring that any upgrades required at existing facilities are cost effective in that they generate a real benefit over the existing capabilities for the additional cost incurred. In addition, it should be made clear that the cost of all such upgrades will be recoverable. Further, the time required to identify suitable host properties,obtain permitting, and complete the installations should be recognized and accounted for in implementation timelines.	Other	OPA	Thanks for comment. This will be forwarded to the OPA
27	Principle 3	Power Workers Union	In stakeholder discussions at meetings in this consultation that the PWU attended the IESO had indicated that the costs associated with the centralized forecast system would be borne by the variable generators (i.e. the parties associated with the costs). The current proposal would have the IESO recovering these costs through uplift. The IESO has not provided a satisfactory rationale for the change in the proposed recovery mechanism.	Principle	IESO	See Common Theme Q6
28	Principle 3	Power Workers Union	While a centralized forecast will improve dispatch of the new variable generation it will be at a very substantial increase in system costs that are proposed to be recovered from consumers. The Canadian manufacturers and Exporters (“CME”)1 estimated the costs for FIT ($3.848 Billion), RESOP ($0.33 Billion) and Renewables ($0.096 Billion) to add up to $4.274 Billion over the period 2011-2015.Given the magnitude of the incremental cost that consumers are currently expected to bear, the PWU is opposed to cost recovery of the centralized forecast system from consumers through existing procurement market recovery mechanisms as set out in Principle 3. The PWU recommends that these costs, which are specific to variable generators, be recovered directly from the variable generators until such time when they no longer receive compensation under the FIT contract or a similar replacement contract.	Principle	IESO	See Common Theme Q6
29	Principle 3	Brookfield Renewable Power	Brookfield would agree with the approach taken by the IESO in regard to this principle, as long as it brings tangible benefits to improve grid reliability and does not bring additional costs to legacy wind facilities.	Principle	OPA	Thanks for comment. This will be forwarded to the OPA

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30	Principle 3	Tom Adams	The main purpose of this submission is to oppose the IESO's revised proposal which now would bill consumers for the cost of centralized wind production forecasting. At the September 23, 2010 meeting, the IESO proposed a generator-pays model for centralized forecasting. My recollection of that meeting was that this proposal was uncontroversial and widely agreed. The minutes of the meeting, issued October 28, do not indicate any backlash from the generators on this point. I note that the Wind Power Standing Committee web page does not include a link to the SE-91 page, wherein the IESO reversed its approach to forecasting cost responsibility. Observers of the Wind Power Standing Committee who had not received specific notice of SE-91 might have had difficulty following the IESO's change in thinking which appears to have surfaced publicly for the first time in a SE-91 discussion paper dated December 9, 2010. In the discussion paper, the reversal of the generator-pay position of the IESO is not acknowledged. The IESO's justification for the new consumer-pay approach is that the forecast is analogous to the purchase of ancillary services. The IESO argues that better wind forecasting will improve the market's efficiency and security. While it is true that better forecasting will enhance the market, the analogy to ancillary services is lacks a logical foundation.	Principle and Detailed Design	IESO	See Common Theme Q6
31	Principle 4	Power Advisory LLC	The IESO should provide a detailed listing of similar data and informational requirements required by other ISOs/RTOs and applicable jurisdictions.	Detailed Design	IESO	See Common Theme Q1
32	Principle 4	Power Advisory LLC	Does the IESO plan to request real-time SCADA access? If so, the Consortium is concerned why the IESO needs this data and what the data will be used for.	Detailed Design	IESO	See answers to Specific Comments
33	Principle 4	Robert Cary & Associates Inc	It is our expectation that the forecasting tool will "learn" and refine the actual facility performance parameters over time to recognize that initial static data will typically be manufacturers guarantee data with an expected degree of conservatism. This should be added to this principle.	Principle and Detailed Design	IESO	See Common Theme Q8
34	Principle 4	Penn Energy Renewables Ltd	Some of proposed principles, such as Principle 4, may also require wind and solar embedded generators to submit dynamic data to the IESO. In this regard, to avoid duplication of resources and to enable efficiencies that would benefit electricity ratepayers, it is recommended that: (i) To the extent that generating stations' telemetry data is available with the distributor (for example, MW, MVAR, power factor, etc. readings transmitted from the embedded generator to the distributor's control centre), the IESO should obtain such data directly from the distributor. (ii) If local meteorological data (such as solar intensity) is required by the IESO in real time, then it would be more economical for such data to be obtained by the distributors. Since most distributors are in the process of investing in "Smart Grid" initiatives, including telecommunication for operation and control of the distribution systems, and since distributors may have more	Detailed Design	IESO	Thanks for comment
35	Principle 4	Brookfield Renewable Power	This principle would be acceptable in concept, subject to respecting the confidentiality nature of the information shared by each participant, including the associated vendor data. Such data may have deficiencies due to MP imposed or vendor imposed limitations.	Principle and Detailed Design	IESO	See Common Theme Q5
36	Principle 4	Invenergy Wind Canada	Limit to one meteorological tower per project with additional data provided from other sources, i.e. equipment on the turbines. This would also satisfy the meteorological tower requirements within Principle 5	Principle and Detailed Design	IESO	See Common Theme Q10

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37	Principle 5	Power Advisory LLC	The IESO should provide a summary of the dynamic data that variable generators are obligated to provide ISOs/RTOs in other jurisdictions. To avoid overly burdensome requirements, there should be a threshold of materiality in the data that must be submitted to the forecast provider (i.e., IESO) (e.g., with respect to turbine outage size or duration).	Detailed Design	IESO	See Common Theme Q1
38	Principle 5	Power Advisory LLC	The proposed generator obligation to report data from independent meteorological towers located "such that turbines are within 5 km of a measurement point" is unnecessary and costly. The data from such a measurement point is only a proxy for that of actual production (i.e., where the generation facility will be physically located) and adds the development costs of wind generation projects. In addition, for projects that are sufficiently advanced in achieving their Renewable Energy Approval (REA), or have achieved their REA, this new requirement will be problematic and will frustrate the REA process.	Detailed Design	IESO	See Common Theme Q10 and Q12
39	Principle 5	Power Advisory LLC	Principles 4 and 5 can be combined for simplification.	Principle	IESO	Statement
40	Principle 5	Brookfield Renewable Power	This principle would be acceptable in concept, with some concerns expressed above on the confidentiality front. Since not compensated, including implementation time, since vendor devices are not always conductive to interrogating for all IESO data requirements. Facilities in operation prior to these new requirements going into place should have special dispensation if they are to provide such data	Detailed Design	OPA	Thanks for comment. This will be forwarded to the OPA
41	Principle 5	Invenergy Wind Canada	We suggest the following as additional detail to specific information: P4-Third bullet point: wind turbine outage/availability information 1. Provide number of available units to IESO 2. Report outages that are greater than 5 MW IESO to receive planned outage information for those outages greater than 5 MW	Principle and Detailed Design	IESO	Thanks for comment
42	Principle 6	Power Advisory LLC	Forecasts should be public, but meteorological data should not be identified to a specific generation facility. Individual generation facilities may have issue with real-time facility-specific disclosure, as this is confidential commercial data regarding the power production of a given facility.	Principle and Detailed Design	IESO	See Common Theme Q5
43	Principle 6	TransAlta Corporation	While we recognize the need of IESO to gather sufficient technical data about each facility in order to generate worth while forecasts, we are concerned about the potential for confidential information to become known publically.We would therefore suggest that all data relating to the relationship between wind conditions and generation or generation capacity at a particular windfarm be held as confidential as this may be commercially sensitive or of benefit to a competitor.	Principle	IESO	See Common Theme Q5
44	Principle 6	Robert Cary & Associates Inc	The principle should be amended to be; "Appropriately aggregated meteorological data and wind generation forecasts will be publicly available. Site-specific meteorological data and wind generation forecasts will be made available to the registered market participant for the facility."	Principle	IESO	See Common Theme Q5

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45	Principle 6	Power Workers Union	The PWU supports making all meteorological data and forecasts publicly available as provided for in Principle 6. In addition, the IESO should provide monthly data and analysis on the performance of the forecast system. Further, the IESO's traditional data provisions should be expanded to make available all data and pricing information related to the changes proposed under these principles. The IESO should also provide for data collection and disclosure of SBG forecasts, actual SBG events, SBG costs, as well as a quarterly analysis of possible causes and remedies.	Principle and Detailed Design	IESO	See Common Theme Q5 and Q8
46	Principle 6	Brookfield Renewable Power	The principle should be amended as follows; "Appropriately aggregated met data and wind generation forecasts will be made publicly available. Site-specific met data and wind generation forecasts will be made available only to the registered market participant for the facility"	Principle	IESO	See Common Theme Q5
47	Principle 7	Power Advisory LLC	Are other jurisdictions dispatching variable generation on a 5-minute security constrained dispatch? If not, what are they doing and why? Organized markets in the U.S. are generally moving towards such more frequent dispatch, as it correlates closer with the forecasted production of wind generators.	Principle	IESO	See Common Theme Q2
48	Principle 7	Power Advisory LLC	What analysis has the IESO done comparing dispatch intervals (e.g., hourly versus other intervals, e.g., 15-minute, 5-minute, etc.)?	Principle	IESO	See Common Theme Q2
49	Principle 7	Power Advisory LLC	The IESO and stakeholders need clarity on what is meant by "economic basis". Clarity with this point is also extremely important concerning Principle 10 and the potential establishment of different offer price floors that will ultimately determine the dispatch order of generation facilities.	Principle	IESO	See Common Theme Q11
50	Principle 7	Power Advisory LLC	In general, frequent dispatch intervals should help promote wind generation. However, it's too early in this process to propose any dispatch interval, as not enough information and analysis has been conveyed to stakeholders. Therefore, the Consortium requests Principle 7 to be, "Actively dispatch all variable resources connected to the IESO-Controlled Grid in an economic manner in accordance with the real-time needs of the power system", or something similar, and the IESO should not make any decisions at this time on a scheduling/dispatch interval.	Principle	IESO	See Common Theme Q2
51	Principle 7	TransAlta Corporation	While existing windfarms may have been designed and built with the ability to curtail all generation quickly in the event of a system emergency, restarting a stopped wind turbine is not as simple and often results in an extended outage. Simply put, existing windfarms have not been designed to accommodate 5 minute dispatch signals and there may be substantial hurdles to making them more dispatchable. Few windfarms are manned on a 24 hour a day basis, and substantial costs would be incurred if they were required to do so. While all costs associated with upgrading the facility to meet these additional requirements should be recovered from consumers, consideration should be given to accommodating facilities within their present capabilities where such upgrades are not economically justifiable	Detailed Design	IESO	Thanks for comment
52	Principle 7	SunEdison	Supports principles on dispatch and visibility	Principle	IESO	Statement

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53	Principle 7	Robert Cary & Associates Inc	Pending resolution of concerns related to 5 minute dispatch, request the deletion of all references to 5 minute dispatch as a principle for renewable integration. The following redrafting is proposed; "Actively schedule and dispatch all variable resources connected to the IESO-Controlled Grid at appropriate intervals."	Principle	IESO	See Common Theme Q2
54	Principle 7	CanWEA	Providing visibility for currently operating embedded and distribution connected projects may be very costly. Some allowance for grandfathering where the situation warrants should be considered. This may be facilitated by coordinating the need for visibility with existing Local Distribution Company's (LDC's). We suggest that the IESO consider using existing visibility rules for those embedded and distribution connected plants as required (LDC's).	Detailed Design	IESO	Thanks for comment
55	Principle 7	CanWEA	Transmission connected projects are concerned about dispatchability and curtailment from a contract settlement basis. We request clarification on several issues: 1. How detailed will the forecast be? 2. How will IESO account for variables that cannot reasonably be forecast such as icing events, wake losses, etc.? 3. How and who will develop the methodology for determining foregone energy (lost opportunity) once dispatch instructions are submitted (dispatch down, even though generator could produce more)? 4. In addition to the above, obtaining a more clear understanding on the desire to treat wind energy, where possible, as a firm source of power, is warranted, and any implications behind this. 5. Will the IESO have a dispute mechanism in place where there is disagreement between the OPA and the generator, with respect to foregone energy losses?	Detailed Design	IESO	See Common Theme Q7
56	Principle 7	Northland Power Inc	Discussion about generators responding to 5 minute dispatch signals which is a proceed change that would result in significant costs to generators due to additional staffing, dispatch workstations, and telemetry upgrades to allow dispatch signals. With this extra manpower, forecasting could effectively be decentralized back to the generators which would achieve the original intent of getting better forecasts, without the duplicate and costly efforts of both the IESO and generators. However, as stated before, the generators have not factored these additional costs into their OPA contracts.	Principle	IESO and OPA	See Common Theme Q2

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57	Principle 7	Brookfield Renewable Power	While the principle of active dispatch remains conceptually acceptable to Brookfield, expecting the variable resources to dispatch on a 5 minute basis is not practical. We would prefer that dispatch options be granted to wind facilities. Depending on its vintage not all resources will be able to curtail as quickly or as often as other facilities. Time interval dispatch options should be provided to participants such as hourly signals or 15 and/or 30 minute signals as is done in other markets. In addition, we agree that once as active dispatch is delivered from the IESO that the resource should respond within 5 minutes to comply with the new dispatch signal. The IESO needs to consider how to best return the facility to its previous dispatch if wind has dropped out and it no longer is capable of dispatching previous output. Will maximum output be set at forecast? Will the compliance dead band be considered? The facilities that provide more flexibility should be compensated accordingly and those with operational constraints shall not be penalized.	Principle and Detailed Design	IESO	See Common Theme Q2 and Q4
58	Principle 7	Ontario Power Generation	Speaks to the economic dispatch of variable resources on a five-minute basis. OPG believes that the chosen solution must be equally applied to all resources.	Principle	IESO	See Common Theme Q2
59	Principle 7	Invenergy Wind Canada	IESO to actively dispatch all grid connected variable resources through the five minute security constrained economic dispatch. The dispatch signal sent to the resources will not require manual intervention, similar to other ISO/RTO practices (ICCP for example)	Detailed Design	IESO	Thanks for comment
60	Principle 7	Hydro One Networks Inc.	Regarding the issue of dispatch, the IESO has stated that it is not proposing to dispatch embedded generation at this time. However, there are plans to connect approximately 1,900 MW of renewable generation on the distribution system by 2013 as part of the first phase of the FIT program. It is also expected that two new nuclear generators at Bruce GS will be coming on-line in 2012. These two developments will undoubtedly lead to a continued increase in the expected frequency of SBG over the next few years and will necessitate the requirement to dispatch embedded generation at some point. At what threshold of connected embedded renewable generation (or perhaps SBG frequency) does the IESO foresee the requirement to dispatch embedded generation to resolve SBG conditions? The fact that there is no current direction to dispatch embedded generation may also stimulate more investment in renewable generation on the distribution system in the next phase of the FIT program, which would compound the situation further. The amount of renewable generation being connected on the distribution system may also lead to both local and global reliability issues that would also necessitate the requirement to dispatch embedded generation. Does the IESO know how it plans to dispatch embedded generation and how it will enforce the dispatch requirement on embedded generators that have already been connected? If the IESO does feel that dispatching embedded generation is inevitable, is anything being done to address this eventual requirement either through contracts being signed with generator proponents or by ensuring that distributors provide the	Principle and Detailed Design	IESO	See Common Theme Q11
61	Principle 8	Power Advisory LLC	How will the deadband be determined? Will the deadband be static?	Detailed Design	IESO	See answers to Specific Comments
62	Principle 8	Power Advisory LLC	What compliance measures (e.g., penalties, sanctions) will be applied? How will they be developed?	Detailed Design	IESO	See answers to Specific Comments

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63	Principle 8	Power Advisory LLC	There should not be penalties or charges for exceeding any kind of “compliance deadband” provided that the wind generator follows the schedule based on the centralized forecast.	Detailed Design	IESO	Thanks for comment
64	Principle 8	Robert Cary & Associates Inc	Please refer to comments under principle 2, above. Dispatch should not constrain output except when it needs to. The over-generation deadband could be reduced under a “wind dispatch operating state”	Detailed Design	IESO	Thanks for comment
65	Principle 8	Power Workers Union	Principle 8 should be changed so that it reads that variable generators “must” rather than “should” operate within a compliance deadband when ambient conditions offer sufficient fuel when they are dispatched.	Principle	IESO	See answers to Specific Comments
66	Principle 8	Northland Power Inc	Consideration should be given for the converse situation when the maximum output is more than the highest threshold to ensure that generation, and revenue, is not constrained due to under/incorrect forecasting by the forecaster.	Detailed Design	IESO	Thanks for comment
67	Principle 8	Brookfield Renewable Power	Brookfield agrees that the IESO should develop new rule for variable dead band compliance, similar to dispatchable facilities, conditional to respecting the nature of this resource by providing a larger dead band range that typical facilities to reflect the variability of wind.	Detailed Design	IESO	Thanks for comment
68	Principle 8	Brookfield Renewable Power	New market rules should be developed in regards to outage coordination for variable facilities. All generation facilities are currently required to submit their respective outage schedules 33 days or 14 days in advance if it is a large station outage. In addition, short notice outages are accepted on a case by case basis. Since the visibility of variable facilities is totally dependents on unpredictable resources (wind and solar), the IESO should grant additional flexibility to such resources in outage planning. We propose that such facilities be allowed in addition to the current rules to schedule outages with short notice (2 hours) within a capacity outage limitation of 10% or 15 MW, whichever is greater of the total facilities output. Furthermore most wind turbine generator outages will be turbine or one at a time, which will have little impact on the farms overall capability.	Detailed Design	IESO	Thanks for comment
69	Principle 8	Tom Adams	The IESO is proposing not just to transfer forecasting costs to consumers but also to provide relaxed dispatch compliance deadband rules for wind generators. It is foreseeable that these relaxed deadband rules will increase consumer costs as the size of the wind fleet increases. Operating reserve and ancillary services requirements associated with wind generation are under review through the NERC Integration of Variable Generation Task Force. I urge the IESO to closely monitor the record of wind generators with respect to dispatch compliance and the resulting cost implications. In the event that cost to consumers become significant, less relaxed compliance rules should be considered.	Principle and Detailed Design	IESO	See Common Theme Q12
70	Principle 9	Power Advisory LLC	Variable generators subject to dispatch instructions must be entitled to CMSC payments – both constrained-on and constrained-off payments (i.e., compensation for curtailment).	Principle	IESO	See answers to Specific Comments
71	Principle 9	Power Advisory LLC	The Consortium requests that in accordance with IESO Market Rule changes, the OPA shall clarify any potential changes to applicable OPA contracts in a timely manner in order to create consistency for operational, dispatch and settlement purposes, among other changes and purposes.	Other	OPA	Thanks for comment. This will be forwarded to the OPA

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72	Principle 9	Robert Cary & Associates Inc	This looks good in principle, and will need a lot of careful consideration. For example, how will wind be represented in the unconstrained dispatch, if it is always on a zero ramp persistence basis unless specifically dispatched down?	Detailed Design	IESO	See answers to Specific Comments
73	Principle 9	Power Workers Union	Contrary to Principle 9 which unconditionally entitles variable generation to CMSC payments, the PWU recommends that variable generators should only be entitled to the CMSC payment once they are no longer compensated under the FIT contract, or a similar replacement contract.	Principle	IESO	See answers to Specific Comments
74	Principle 9	Brookfield Renewable Power	This principle is also acceptable in concept, as long as MP has the ability to measure lost generation caused by any constraint, including transmission related ones. In some instances of loss of power sources, the wind facility can lose (power supply) measuring devices (anemometers) and therefore can not accurately calculate total losses. In such cases, the facility should be able to submit an estimate based on the local weather network data	Detailed Design	IESO	Thanks for comment
75	Principle 9	Tom Adams	Regarding the IESO's proposal to make Congestion Management Settlement Credit (CMSC) payments available to wind generators, the discussion paper of December 9th and subsequent discussion slides provide very little background information. No estimates of costs are provided or review of alternatives. For the purposes of these comments, I am assuming that any CMSC payments to wind generators will simply be part of the make whole payment to keep them in line with their FIT contract payment. If this assumption is incorrect, I would ask that the IESO provide a more complete explanation. One substantive issue to consider is whether CMSC payments are most likely to arise during periods of low HOEP. If this is the case, then I would suggest that it is important to ensure that these costs to be not be recovered in a way that associates the recovery with demand charges. To optimize the efficiency of the system and to minimize overall costs to consumers, demand charges should recover demand-related costs only. The IESO should consider the proposed CMSC structure from the perspective of efficiency taking into account the overall design of the market.	Principle and Detailed Design	IESO	See Common Theme Q12
76	Principle 10	Power Advisory LLC	How will the different offer price floors per baseload resource be determined? What criteria will be used to effectively establish order of baseload generation dispatch?	Detailed Design	IESO	See Common Theme Q11
77	Principle 10	Power Advisory LLC	Will different offer price floors be applicable depending on the location of baseload generation relative to local area demand and applicable local area generation resources (both baseload and non-baseload generation)?	Detailed Design	IESO	See Common Theme Q11
78	Principle 10	Power Advisory LLC	In order to better understand and analyze what the offer price floors for different generation facilities may be, the IESO should provide information and analysis on local and global congestion and curtailment of energy output from applicable generation facilities.	Detailed Design	IESO	Thanks for comment

#	Commented as	Respondent	Comment Detail	Relates to: Principle, Detailed Design or Other	Accountability	IESO Response
79	Principle 10	Power Advisory LLC	More clarity is required from the OPA concerning the interpretation of applicable contract provisions regarding impacts to "Supplier Economics" relating to changes to IESO Market Rules. For this particular principle, the effect of establishing different offer floor prices will essentially rank the order to which baseload generation facilities are dispatched. As a result, this may significantly impact the frequency to which variable generation facilities are scheduled to produce energy which will have implications for lost revenue under OPA contracts.	Other	OPA	Thanks for comment. This will be forwarded to the OPA
80	Principle 10	Power Advisory LLC	The different offer price floors to be applied to different baseload generation classes of facilities (e.g., solar PV, wind, nuclear, must-run hydro) must be distinct and largely negative in order to avoid "clustering" and provide for discreet dispatch "blocks" in order to incentivize generation bidding behaviour that will result in a economically predictable dispatch (e.g., if resource A has the lowest offer price floor then resource B should not be able to be dispatched ahead of resource A where distinct and largely negatively priced blocks of generation offers will help facilitate this result as opposed to negatively priced blocks that are relatively close in offer price).	Detailed Design	IESO	Thanks for comment
81	Principle 10	Power Advisory LLC	Lost revenue associated with these types of curtailments should be fully reimbursable to renewable generators; otherwise, inflexibility of other types of generation resources that cannot be as easily curtailed harms wind generation, and flexibility of wind generation is not compensated.	Other	OPA	Thanks for comment. This will be forwarded to the OPA
82	Principle 10	TransAlta Corporation	The proposal to require all wind generation to offer in at -$1 will lead to large price ledge which may be unwieldy and which may result in disputes between parties that feel they are curtailed an unfair number of times. We suggest that wind generators be tiered such that those facilities that can most easily dispatch up and down and recover the costs associated with doing so are curtailed first, and facilities that have limited ability offer in at a lower price and avoid unnecessary curtailment.	Detailed Design	IESO	Thanks for comment
83	Principle 10	TransAlta Corporation	More resources should be put into ensuring that base load nuclear and hydraulic plants are more responsive to market conditions. Wind generators and the general public need to be assured that wind generation is being treated fairly and consistently compared to nuclear and hydraulic generators. Arguments about the inability of nuclear generation to dispatch down also apply to other forms of generation and no one source should be perceived as getting special treatment	Other	IESO	Thanks for comment
84	Principle 10	Robert Cary & Associates Inc	Propose that following sentences be added to the principle: "Any floor prices so established should: 1. be tiered within each technology to recognize differences between output reduction and unit shutdown, and 2. be sufficiently large negative values that operation of the economic incentives jointly established in the market and either contracts or regulated price regimes will generally pre-empt reliance on the floors. Consideration should also be given to generational or sub-technology based tiers within each technology and to the recognition of sustainability benefits of certain technologies."	Principle and Detailed Design	IESO	See Common Theme Q11

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85	Principle 10	Power Workers Union	Principle 10 states that the IESO may establish floor prices for offers from baseload generators to ensure efficient dispatches during periods of SBG. The PWU submits that the IESO should not establish floor prices for offers from must run hydroelectric generators or from nuclear generators absent adequate compensation to these essential generators. The IESO has projected very significant SBG events with the increased connection of variable generation to the system. These SBG events create incremental costs, and new risks to safety, asset condition and maintenance of nuclear and hydro facilities for which they should be properly compensated.	Principle	IESO	See Common Theme Q11
86	Principle 10	Northland Power Inc	With respect to Principle 10 which states "the IESO would limit a wind generators offer to $0/MW (or some other reasonably small negative value to account for any lost opportunity)", seems contradictory to the integrity of a market and FIT agreements which allow a generator to offer what it wishes, take certain risks with its offer, and operate accordingly, in order to retain the integrity of the market.	Principle	IESO	See Common Theme Q11
87	Principle 10	Brookfield Renewable Power	We would expect floor prices from base load generators to reflect the range of technologies and recognize the clear distinctions that must be made between reductions and shutdowns in all technologies. Historical operations should be taken into consideration, as it is the case with most nuclear facilities they have traditionally been capable of dispatching a portion of their load (up to 30% of capacity) for several hours or days in response to IESO security limitations such as the FABC limit or other regional limits. Wind mills may be deemed base load facilities, but should be distinguished between facilities designed with foreknowledge of these requirements from those designed and built without. The IESO also needs to consider what impact the application of transmission loss factors will have on any such offer floor prices. Where a facility may be more economic to remain generating, when transmission losses are accounted for it may very well be required to be curtailed. In such cases locational impacts may actually be in reverse to what the IESO is actually trying to accomplish when respecting certain security limits. In conclusion, we would propose that the following sentences be added to this principle: "Any floor prices so established should: 1. be tiered within each technology to recognize differences between output reduction and unit shutdown, and 2. be sufficiently large negative values that operation of the economic incentives jointly established in the market and either contracts or regulated price regimes will generally pre-empt reliance on the floors.	Principle and Detailed Design	IESO	See Common Theme Q11
88	Principle 10	Ontario Power Generation	Raise a concern that the potential for prescriptive offer floor prices captured in principle 10 may introduce distortion to the offer curve, which in turn may result in unintended outcomes relating to intertie trading, market prices and the offer practices of other generators.	Detailed Design	IESO	Thanks for comment

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89	Principle 10	Bruce Power	Bruce power supports the principles presented by the IESO to alleviate the short term operational concerns driven by surplus generation. However, its important to recognize that there is more to address. The industry must recognize that not all surplus circumstances are the same. From Bruce Powers experience with SBG it can be classified into 3 general groups: 1. Short term or transient SBG (detail and examples in letter) 2. Prolonged periods of SBG (detail and examples in letter) 3. Periods of excess generation (detail and examples in letter) The industry must recognize that surplus situations will persist for sometime and adopt a holistic approach to managing the situation.	Detailed Design	IESO	Thanks for comment
90	Principle 11	Power Advisory LLC	Are other jurisdictions permitting variable generation to participate in ancillary service markets? If so, which ones and what are the applicable rules (including revenues and settlement)? Can the IESO provide a summary of what's being done in other jurisdictions? This should be a next-generation issue. There aren't any significant ancillary service markets in which wind generators participate in the US, and it would be a distraction to focus on those issues at the outset in Ontario.	Detailed Design	IESO	See answers to Specific Comments
91	Principle 11	Robert Cary & Associates Inc	We are trying to understand the circumstance in which a wind facility would be constrained off for energy (presumably with a negative energy offer), but could access transmission as operating reserve, for which we would not expect negative prices. As noted above under Principle 7, we suggest that the 5 minute dispatchability be a separate ancillary service offered on a voluntary basis, a bit like negative operating reserve. We also need to include consideration of Voltage Support as an Ancillary Service offered by wind facilities.	Detailed Design	IESO	Thanks for comment
92	Principle 11	Power Workers Union	Principle 11 which proposes to allow variable generators to participate in the OR Market and the Ancillary Market provides additional benefits and opportunity to the variable generators for incremental revenue above that contemplated under FIT. Should the IESO decide to continue along the cost recovery path set out in Principle 3, the IESO should recommend that the OPA include the economic benefits associated with participation in the OR and ancillary markets and deduct these benefits from the current and future tariffs to be paid to variable generators.The IESO and OPA should document all aggregate incremental payments paid to variable generators and provide stakeholders with monthly reports detailing the activity levels and resulting actual payment amounts.	Other	OPA	Thanks for comment. This will be forwarded to the OPA
93	Principle 11	Power Workers Union	Principle 11 provides for, in the long-term, eligibility of variable resources for participation in the OR and ancillary markets where technically feasible. The PWU submits that this principle should not apply until such time when a variable resource proponent is no longer under a FIT contract, or any similar replacement contract.	Principle	IESO	Thanks for comment

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94	Principle 11	Brookfield Renewable Power	Brookfield agrees in general with this principle that any facility constrained or curtailed by the IESO under any new market rules should have its energy be made available for 10 and 30 minute Operating Reserve markets when technically feasible. In addition, we believe that a new ancillary market for inter-hour dispatch similar to AGC be considered, but with longer dispatch intervals such as 15 or 30 minutes, for variable generation facilities. Lastly voltage support ancillary services should also be contemplated for these facilities since they have excellent abilities to provide voltage support due to their state of the art wind farm management control systems.	Detailed Design	IESO	Thanks for comment
95	Principle 11	Ontario Power Generation	Fore the longer-term, there should be a recognition that effective integration of renewable generation may lead to impacts in other areas, such as regulation quantities and operating reserve quantities. These areas will require further analysis and stakeholder input through separate initiatives but should not be permitted to hinder the progress of the current initiative.	Other	IESO	Thanks for comment
96	General Comment	Power Advisory LLC	The Principles will form the basis for future market rule changes in order to best ensure successful integration of renewable generation resources in the IESO-Administered Markets. What is the schedule and timeline for proposed rule changes to be brought forward to the IESO Technical Panel for approval?	Other	IESO and OPA	See Common Theme Q7
97	General Comment	Power Advisory LLC	The IESO should bring forward all proposed rule changes within a single integrated package rather than through separate packages. Stakeholders can more effectively evaluate both the potential impacts of the proposed rule changes and how each specific rule change relates to other proposed rule changes. Evaluation of how to effectively integrate renewable generation resources in the IESO-Administered Markets can best be done in the context of evaluation of all proposed rule changes and may not be optimally done if proposed rule changes are brought forward to the Technical Panel at different times. Further, a single package of proposed rule changes provides greater clarity (rather than multiple packages being developed at different times) so as to limit issues with the development of applicable renewable generation projects. The exception to this is if there is a discrete rule change with clear benefits to wind generation integration; in such a case, the overall regulatory review should not delay implementing a discrete rule change that aids wind generation integration.	Other	IESO and OPA	See Common Theme Q7

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98	General Comment	Power Advisory LLC	First, in order to understand the practices in other jurisdictions so as to help develop solutions for the Ontario market, the Consortium requests that the IESO provide stakeholders with research involving a benchmark from at least the U.S. jurisdictions for the following key elements regarding the integration of variable generation (similar benchmarking exercises have been done in the U.S., therefore obtaining such information should be non-onerous): 1. ISO/RTO forecast methodologies; 2. Generator static and dynamic data requirements to be submitted to the ISO/RTO; 3. Generator offer/bid requirements and rules; 4. ISO/RTO dispatch and pricing rules; 5. ISO/RTO scheduling and dispatch compliance rules; 6. ISO/RTO settlement rules.	Detailed Design	IESO	See Common Theme Q1
99	General Comment	Power Advisory LLC	Present Ontario Government policies ultimately support and encourage the development of variable generation. Therefore, any changes to the Market Rules should not frustrate achievement of this Government policy. In order to ensure that these policy objectives are met, the IESO and the OPA should reach out to key stakeholders that typically do not participate in IESO consultation processes in order to increase their understanding of the issues and solutions. In particular, the lenders should be made aware and educated on the issues, solutions and direction to facilitate successful development and integration of variable generation. Ultimately, generation projects will not be developed without appropriate financing.	Other	IESO and OPA	Thanks for comment
100	General Comment	Power Advisory LLC	Stakeholders will need a better understanding of how the OPA contracts may be amended in accordance with amendments to Market Rules and become comfortable that any amendments to OPA contracts are consistent with the Market Rules and are made in a timely manner. Therefore, as warranted, the OPA should plan to discuss applicable contract amendments as amendments to Market Rules are brought forward for stakeholder consultation.	Other	IESO and OPA	See Common Theme Q7
101	General Comment	TransAlta Corporation	Existing wind facilities were designed to meet contract and current market rules. The economics of these plants neither included additional capital costs or lost revenue from curtailment due to market conditions. Fairness and the public interested dictate that they be fully compensated for these losses and given appropriate exemption from requirements that they may be unable to meet economically.	Detailed Design	OPA	Thanks for comment. This will be forwarded to the OPA
102	General Comment	TransAlta Corporation	Not related to any specific SE 91 design principle, we are concerned that existing facilities will be disadvantaged compared to future facilities that are designed and built with these proposals in mind, unless special considerations or exemptions are given to existing facilities.We appreciate the recent correspondence from the OPA (09 December 2010 letter from JoAnne Butler)indicating that the OPA will consider appropriate treatment of these contracts,however ongoing communication and clarification of these contractual matters is urgently required.	Other	IESO and OPA	Thanks for comment
103	General Comment	SunEdison	How accurate will the IESO forecasting model be? How will the accuracy of the model be vetted and improved?	Detailed Design	IESO	See Common Theme Q8

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104	General Comment	SunEdison	At what level will the IESO consider the aggregated capacity of solar to have a material impact?	Detailed Design	IESO	See General Stakeholder Feedback
105	General Comment	SunEdison	The IESO specifies that wind resources with an installed capacity of 5MW or greater would be the subject of centralized forecasting. Would the same capacity threshold be used for solar projects? Will the IESO consider the AC or DC capacity of the solar facility?	Detailed Design	IESO	See General Stakeholder Feedback
106	General Comment	SunEdison	What measures will be taken by the IESO to ensure the protection of commercially sensitive information?	Detailed Design	IESO	See Common Theme Q5
107	General Comment	SunEdison	How will forecasts from multiple small-scale renewable generation facilities (e.g.; 10 MW and less) be reported publicly? Will the forecast be aggregated regionally and or by technology?	Detailed Design	IESO	See Common ThemeQ5
108	General Comment	SunEdison	How many "day-light" hours of surplus baseload generation were experienced since 2009? Does the IESO expect solar resources will contribute significantly to surplus baseload generation in the future?	Other	IESO	See General Stakeholder Feedback
109	General Comment	SunEdison	At what point will the IESO deem the uptake of embedded facilities materially significant to require active dispatch?	Detailed Design	IESO	See General Stakeholder Feedback
110	General Comment	SunEdison	Forecasting, visibility and dispatch requirements imposed on existing and planned solar facilities will have an impact on the operations and maintenance requirements of the facilities. Therefore it is critical that the IESO continue to engage representatives from the solar industry regarding these principles.	Other	IESO	Thanks for comment
111	General Comment	SunEdison	The IESO will need to work together with the solar industry to determine the appropriate metrics to be used in the forecasting model (i.e; static data and variable data). The data collected should provide for a sufficiently accurate forecast, while balancing reasonable costs to the generator.	Detailed Design	IESO	Thanks for comment
112	General Comment	Robert Cary & Associates Inc	We propose the addition of an over-riding principle of economic rationality, as follows: “The definition and design of the IESO’s renewables integration program shall be developed with due regard to overall costs and benefits, including recognition of costs borne by renewable generators, whether or not recoverable under their contracts with the OPA. All other principles shall be interpreted with due regard to economic rationality”.	Principle	IESO	Thanks for comment

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113	General Comment	Robert Cary & Associates Inc	We note the comment made in the meeting on 16th December that the IESO's timetable for these changes is pressing, and that the IESO may therefore contemplate phasing the rule changes as issues are resolved and design elements are completed. We see this as a potential problem unless there is sufficient clarity of overall design and of assurance of appropriate (from our perspective) amendment of RES contract provisions at the time of the first proposed rule amendment. We will be in communication with the OPA, and will also seek the IESO's collaboration and support in achieving the appropriate outcomes. We understand that the IESO is committed to doing what it takes to achieve successful and timely implementation, and we look to the IESO to assist in and support us in resolving this concern. In particular we propose that rules changes should only become applicable to existing facilities following execution of the compensatory OPA contract changes and reasonable time thereafter for implementation of the necessary tools, organization and staffing changes, and training.	Other	IESO and OPA	Thanks for comment
114	General Comment	Power Workers Union	The PWU submits that the proposed design principles do not adequately address the economic impacts of the proposed renewable integration. In the PWU's view robust economic assessment of the integration of variable renewable generation is essential in contemplating new opportunities (e.g. participation in operating reserve ("OR") and ancillary markets) and Congestion Management Settlement Credit ("CMSC") payments for the FIT renewable resources, and in considering cost recovery of the wind forecast system from all system users. In addition, the IESO's proposed new restrictions on nuclear and hydro generators which could prevent them from adjusting their prices during periods of Surplus Baseload Generation ("SBG") need to be factored in the economic assessment. The IESO and the Ontario Power Authority ("OPA") should fully consider economic circumstances in determining how and when the design principles are implemented to reflect the benefits variable generators receive from the proposed changes.	Principle	IESO	Thanks for comment
115	General Comment	Power Workers Union	None of the named jurisdictions (PJM, MISO, ERCOT, CAISO and NYISO) have a hybrid market and a FIT program with contract rates as attractive as those provided in Ontario. Ontario's FIT program provides for very attractive rates of return to variable generators over long term (i.e. 20 year) contracts. Contrary to this statement, variable generation and the FIT program in fact reduce market efficiency and increase costs when compared to the pre-FIT conditions and new incremental variable generation.	Other	IESO	Thanks for comment
116	General Comment	Power Workers Union	The OPA should include in the renegotiated contracts, provisions that allow the OPA the option to further modify the renewable contracts at a future date in the event that the IESO makes any future changes to the market design or dispatch procedure.	Other	OPA	Thanks for comment. This will be forwarded to the OPA
117	General Comment	Power Workers Union	The integration of renewable resources will be accomplished in a manner that ensures the fair and equitable treatment of all generators operating under the IESO Controlled Grid.	Principle	IESO	Statement

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118	General Comment	Power Workers Union	The IESO has projected an increase of variable generation to 10,700 MW by 2018. As indicated in CME's evidence, the increased cost to the system of integrating the renewable resources is greater than $4 Billion. Slide 16 of the IESO's presentation on the design principles states that the OPA is aware that certain market rule changes may trigger obligations in the FIT, RES III and HCI contracts and that once more details are known with respect to the market rules, the OPA will engage in more focused discussions with suppliers. Further, the IESO notes that for the other contracts, the OPA will continue to have an open dialogue with suppliers ensuring overall system efficiency while ensuring that ratepayer value is key. For consistency with this stated intent, the OPA should factor the incremental cost into restructured renewable contracts as part of their consideration of the rate payer value. The OPA should also consider the comparative all-in costs for all generation sources when re-pricing the renewable contracts. In this determination the OPA should consider the full life cycle C02 emissions associated with the variable generation. As part of the renewable integration stakeholder process, the OPA should provide stakeholders a balanced scorecard on the factors that the OPA has used in re-determining the contract	Other	OPA	Thanks for comment. This will be forwarded to the OPA
119	General Comment	Penn Energy Renewables Ltd	Most of the distribution-embedded renewable generation facilities do not provide dispatchable power, and, except for security and maintenance, are unmanned and normally unattended. The business model for most of these plants does not include real-time supervision or decision-making with respect to the dispatch and operation of the plant. It is recommended that the IESO's design of the new rules should not result in more onerous requirements wherein these embedded generators have to make provision for additional operating expenses to satisfy new rules and procedures.	Detailed Design	IESO	Thanks for comment
120	General Comment	Penn Energy Renewables Ltd	It is very encouraging that the IESO is working in collaboration with the OPA in the matter of developing rules associated with integrating renewable generation. In this context, in order to ensure efficiencies and for fairness, it is recommended that there should be grandfathering provisions in the IESO's new rules, if any, for the embedded generators so that new, unplanned for, and costly obligations are not placed on proposed embedded generators for which applications have already been submitted to the OPA under the Feed-In-Tariff (FIT) program.	Detailed Design	OPA	Thanks for comment. This will be forwarded to the OPA
121	General Comment	Parker Gallant	From my personal review of the material [Final Stakeholder Engagement Plan (updated December 9, 2010)] contained on your SE-91 website I have been able to discern the principal purpose behind this initiative as being; "Forecasting Ability to predict output from variable resources is essential for maintaining system reliability and market efficiency"; and the objective to: "Explain, discuss, and develop policies, standards and rules that permit a growing amount of renewable generators to be integrated into the Ontario market, while maintaining the reliable, safe, and efficient operation of the IESO controlled grid. " While I personally can appreciate the necessity for IESO to insure that the goal as defined in your Plan is needed to ensure a safe and reliable supply of electricity, it must be realized that each and every ratepayer is affected by any proposal that adds costs to a system that is expected to pass on billions of dollars over the next several years and should therefore be considered in any "Plan".	Other	IESO	Thanks for comment

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122	General Comment	Parker Gallant	Renewable Integration is of interest to many stakeholders. Local distribution companies, generators of all types (particularly wind and solar generators), energy agencies, and employees in the electricity industry, will have the most interest in this discussion paper and its policies, standards, and market rule changes." Your discussion paper envisages the costs associated with this as the responsibility of the ratepayers yet the aforementioned description of Stakeholders fails to even mention us! Hopefully this is just an oversight of a "Plan" rushed to market?	Other	IESO	See General Stakeholder Feedback
123	General Comment	Parker Gallant	" Furthermore, each meteorological tower typically adds $300,000 to the capital cost of the project, and requires additional lease agreements. A better large-scale input network would likely improve the quality of the forecasting over an increase in the number of permanent met towers far better than increased quality/quantity of data at the site. " From the foregoing it is obvious that CanWEA does not see it's members as having any responsibility or requirement to ensure accurate forecasting yet it was their members that determined the exact location of their industrial wind turbine placements. This would, one would assume, have entailed detailed wind pattern studies to ensure maximum output. For that reason alone they should not be balking at the potential costs of adding this responsibility to their endeavours. Indeed, they should be applauding the concept of entitled "Congestion Management Settlement Credit" as has been accepted by the gas generators. Industrial wind turbines are the cause of the problems of providing "intermittent" supplies to the grid which in turn is the reason for the IESO "Plan". As a ratepayer the concept of paying for undispatchable power twice (wind & gas) when demand is low is a concept that I find incredulous and only adds to the incomprehensible results of the GEEA and the many contracts that the OPA has signed. This issue should have been anticipated by the planners in the OPA from the warnings put out by IESO and by them having	Other	IESO and OPA	Thanks for comment