

Non-emitting Resources Request for Information

March 1, 2018

Demand Response Working Group

Today's purpose

- To provide an update to the DRWG on the Non-Emitting Resource Request for Information (NER RFI)

Agenda

1. Objectives and overview
2. Alignment with other initiatives and timelines
3. Draft NER Phase 1 RFI overview
4. Questions and Feedback

RFI objectives and overview

Request for Information (RFI) Objectives

A two phased RFI to gather information on non-emitting resources (NER) to broaden the IESO's understanding of:

Technical Characteristics and Operating Capabilities

- Of existing resources and potential projects (e.g., energy, capacity, and essential reliability services, regional or locational system benefits)

Potential Barriers and Mitigating Options

- For participating in IESO's current and future markets, and ultimately, contributing to a reliable and efficient Ontario electricity system

RFI Phase 1 – Technical and Market Information

Supporting the Market Renewal Program (MRP) by gathering information on:

Current and future market opportunities and challenges

Technical characteristics of a project or facility

Products and services that can be provided

Also focused on potential revenue streams under the MRP and other current IESO-administered markets, including:

Incremental capacity auction

Energy markets (including the development of the single schedule market)

System flexibility and ancillary services

RFI Phase 2 – Project and Costing Information

- Requested information will likely include

Financial and commercial considerations

Project development requirements and considerations

Indicative project capital and operating costs

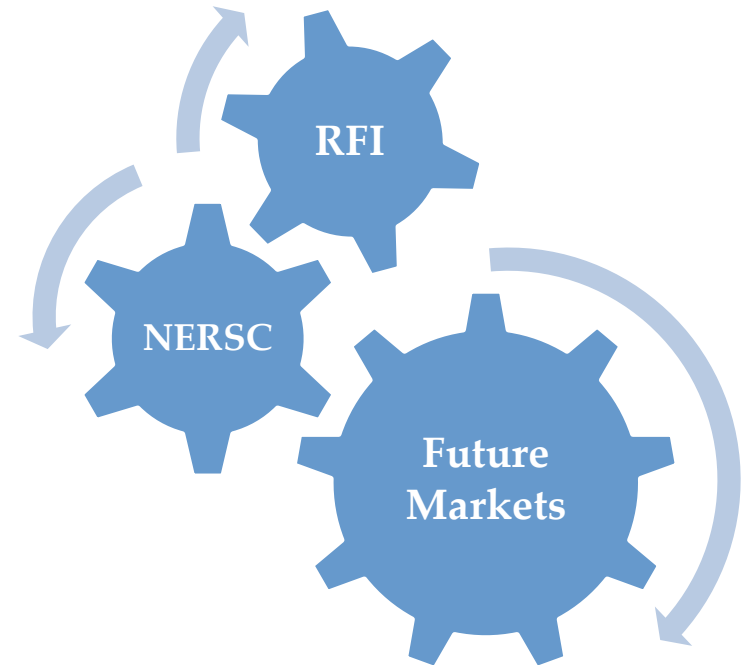
Additional technical information, as may be required to fully understand a given project or technology

- Phase 1 responses will be used to further tailor Phase 2
- Phase 2 is expected to be launched in August/September 2018

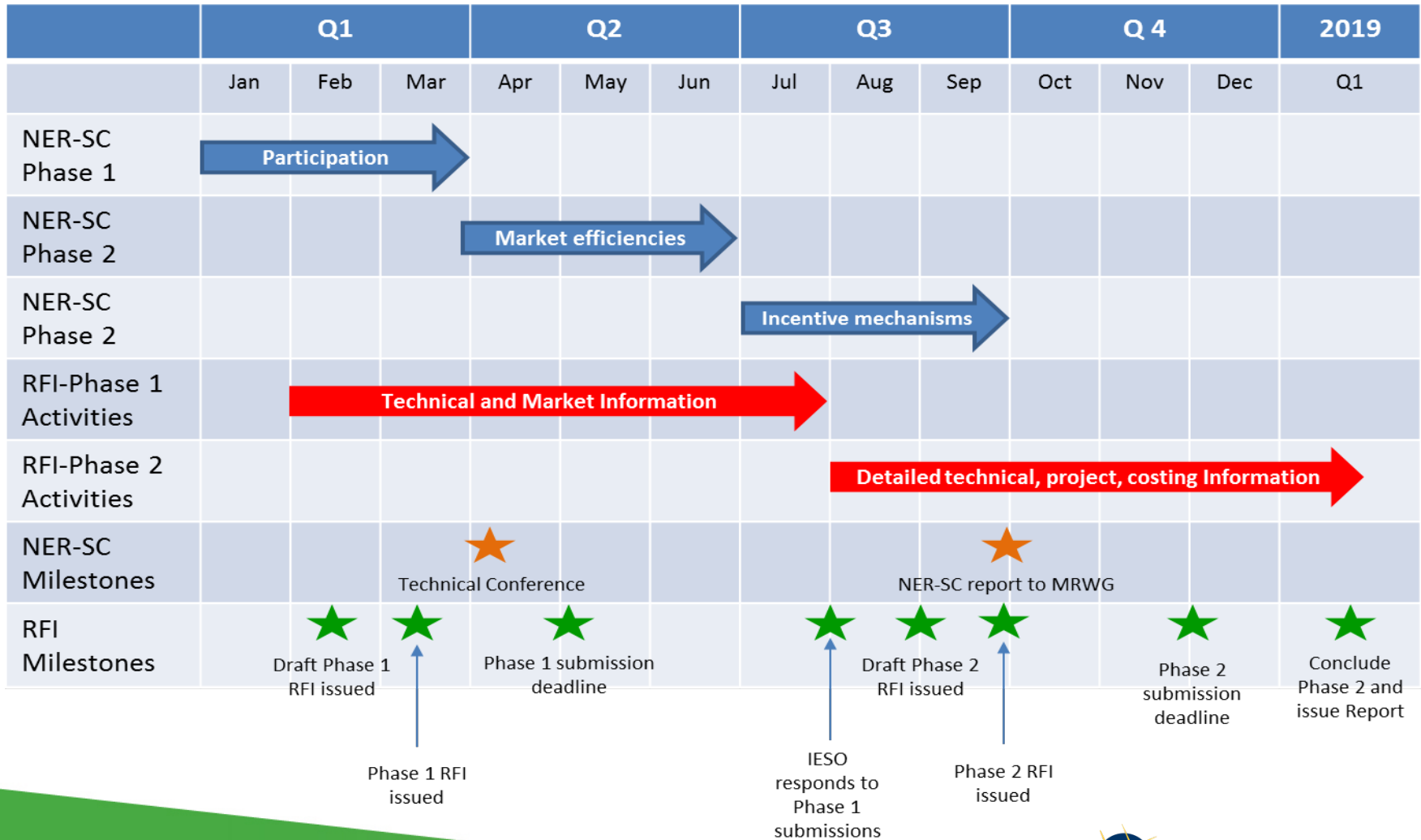
Alignment with other initiatives and timelines

NER RFI and MRP

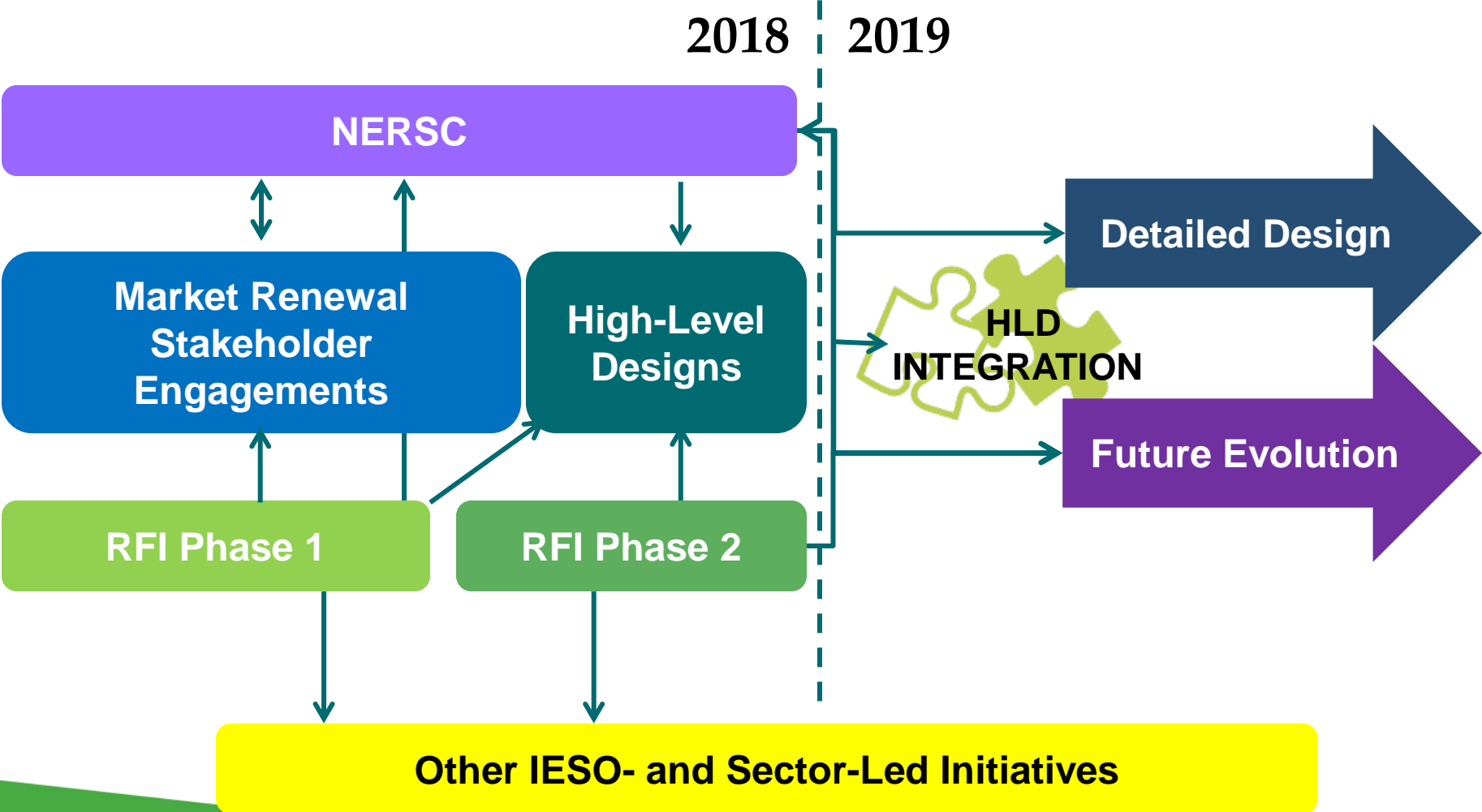
- Broad recognition that NER need to be able to compete on level playing field with other resources to meet future system needs
- The RFI is not part of MRP
 - However, in anticipation that RFI input will have value to the MRP, Phase 1 is aligned to support the work of the Non-Emitting Resource Sub-Committee (NERSC) of the Market Renewal Working Group (MRWG)
 - Phase 2 will help inform the next steps that follow from the work of the NERSC
 - Input will be used to support the MRP and other internal IESO initiatives, aligning with the efforts of other working groups and stakeholdering efforts



RFI and NERSC Timelines



NERSC, RFI and the Big Picture



Draft NER Phase 1 RFI

Phase 1 Timeline and Submissions

December 21	NER RFI kick off webinar – presentation posted
February 15	Draft Phase 1 RFI posted for input IESO responses to initial RFI feedback posted
February 16	NER RFI webinar – presentation posted
March 2	Written feedback due on draft Phase 1 RFI at engagement@ieso.ca
March 19	Post final Phase 1 RFI
May 2	Phase 1 RFI submission deadline
May to August 2018	Evaluate Phase 1 responses and design draft Phase 2 RFI

- Once finalized, RFI submissions to be sent to engagement@ieso.ca by the submission deadline (May 2, 2018).
- To help the IESO identify individual RFI responses, we encourage respondents to use the following subject line:
 - *“Name of respondent”*_RFI – Non-Emitting Resources

Appendix A: Respondent and Technical Information Spreadsheet

- Intended to collect contact information and detailed technical information about the respondent's facility or resource

Facility Characteristics

- Including location, facility type, fuel type and capacity

Facility Status

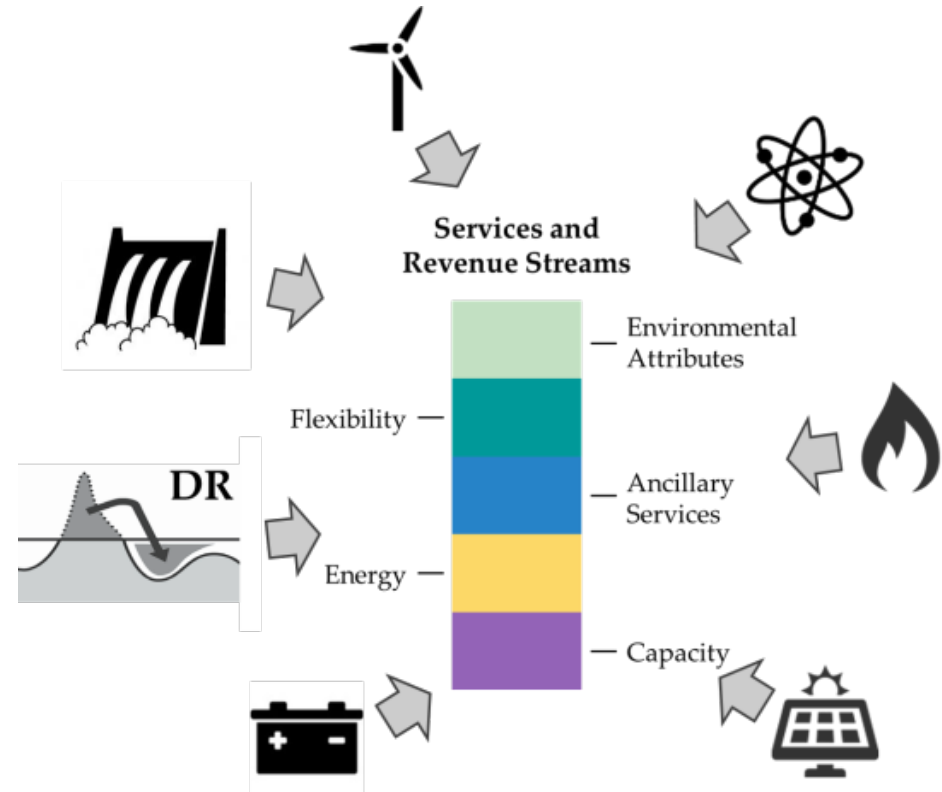
- Including expected facility life, development status and engagement activities undertaken

Technical Information

- Including grid services/products provided, ramp rate and connection information

Appendix B: Questionnaire

- Prevailing market conditions under which NER are currently operating in Ontario and elsewhere
- Opportunities for increased participation in IESO markets
- Role that IESO can play in further enabling participation

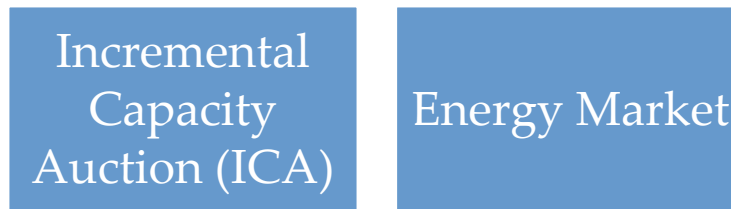


Appendix B: Questionnaire

1. Current Market Opportunities and Challenges



2. Market Renewal Program (MRP)



3. Future Markets



Sample Questions

- Based on current requirements for operating in the IESO controlled grid, as outlined in the IESO Market Rules Chapter 7, are there limitations to your resource's ability to fully participate in any of the IESO markets?
- For existing facilities – are there any modifications, expansions or reconstructions of a facility or facilities that may enable it or them to participate in additional IESO (or other) markets or revenue streams?
- If you have experience participating in markets in other jurisdiction with designs that mirror some of the proposed attributes of the renewed energy market, are there any best practices that you can provide, as they relate to non-emitting resources?
- Are there any services/products that your resource could provide that are not yet contemplated by the IESO? If so, please list jurisdictions in which this service is being or will be provided

Feedback is requested on the draft

- With the posting of the draft Phase 1 RFI, the IESO is looking for input to help tailor the final RFI document
- Written feedback is requested by March 2 and can be submitted to engagement@ieso.ca
- All written feedback will be posted on the NER RFI engagement webpage
<http://www.ieso.ca/en/sector-participants/engagement-initiatives/engagements/non-emitting-resource-request-for-information>
- Program material, timelines, updates and written input on the development of the RFI received from stakeholders will also be posted here