

Achievable Potential Study (APS) Discussion

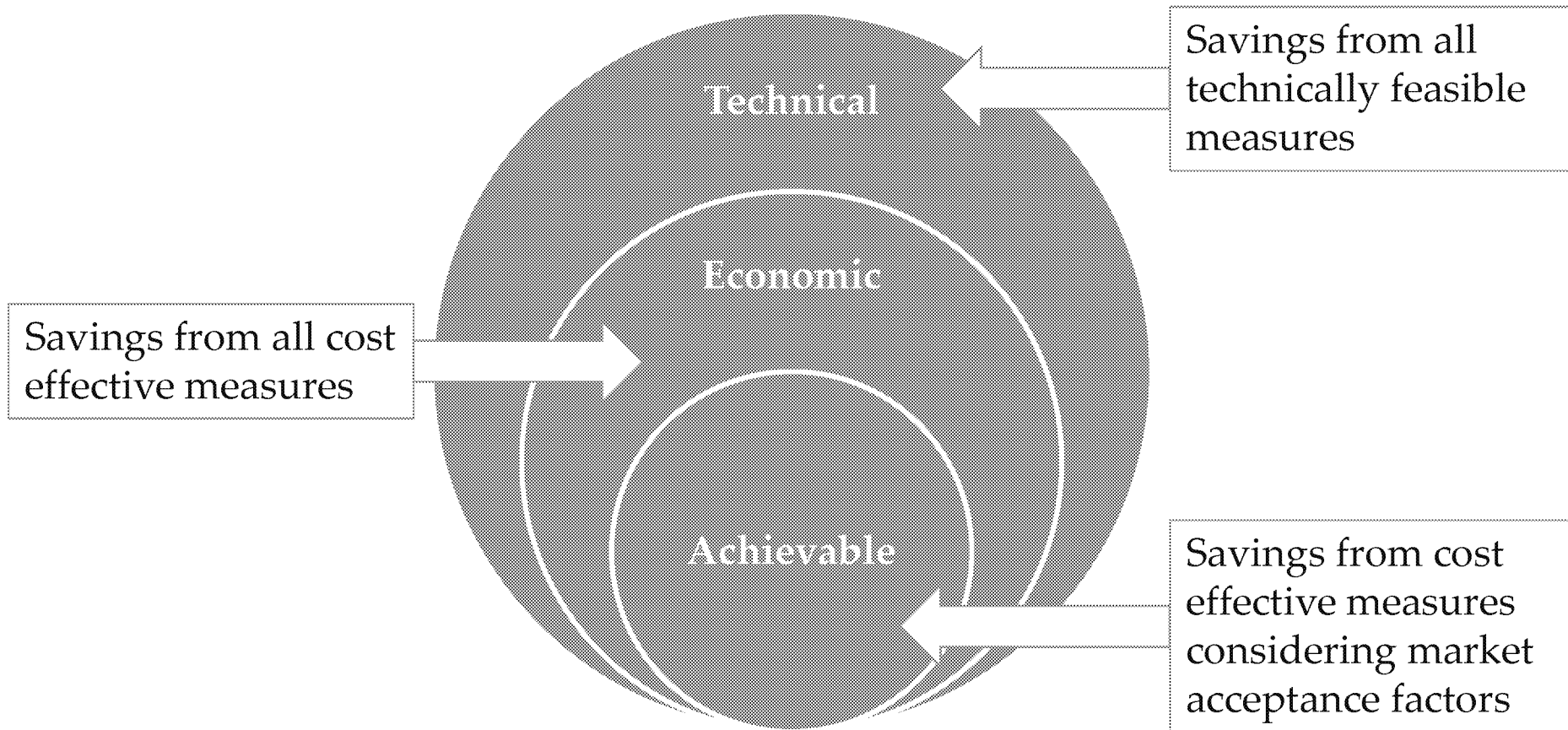
Bronwen Smith
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Mid-term Review Advisory Group Meeting
October 20, 2017

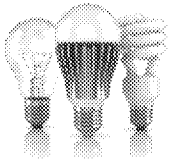
Agenda

- APS Background Materials
- Review of 2016 APS
- Initial Plans for 2019 APS
- Discussion Items
- Next Steps
- Update on Related Work
 - Rooftop Solar Potential Study

Achievable Potential Studies (APS)



APS Components



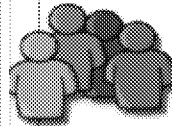
Measure Data



Customer
Characteristics



Utility Data



Market
Conditions

Why Conduct an APS?

- Identify and prioritize sectors and technologies that offer the highest resource opportunities
- Determine appropriate and adequate funding levels for delivering energy efficiency programs
- Inform the development of savings targets
- Inform program design in order to achieve near- and long-term savings potential
- Reassess opportunities as conditions change
- Quantify the energy efficiency resource for system planning
- Input into supply-side resources planning

Policy Direction

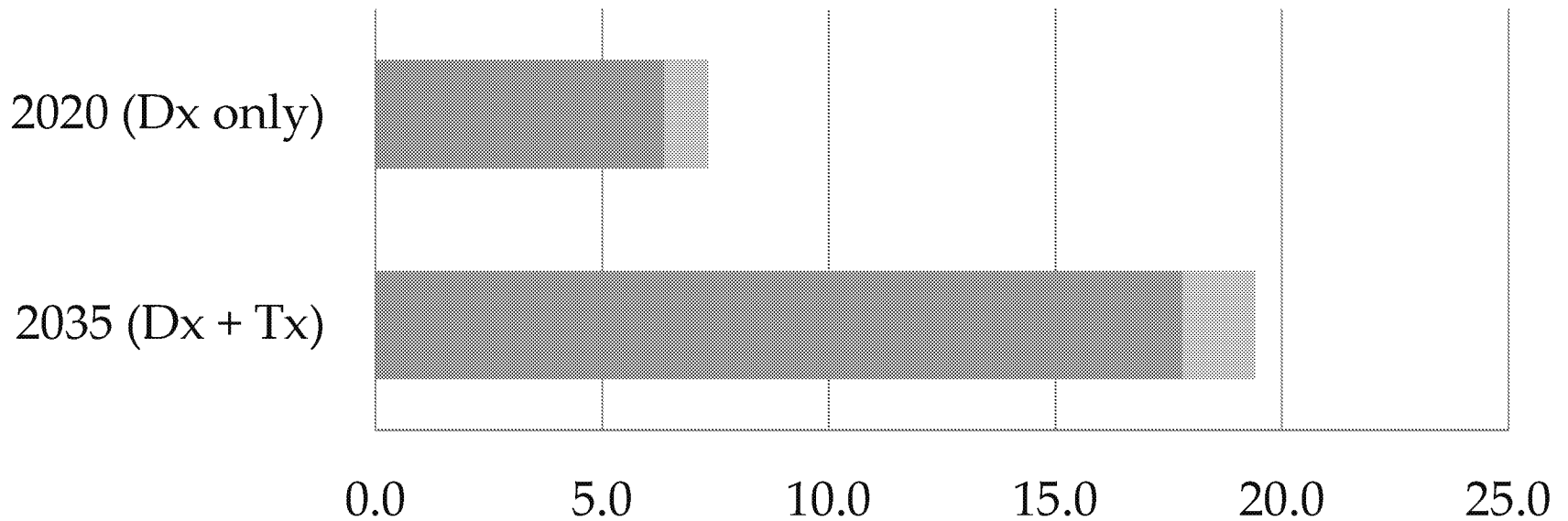
The APS is a requirement of:

- Ministry of Energy directive (Mar 31, 2014)
 - ... conduct an achievable potential study for electricity efficiency in Ontario every three-years ...
 - ... be coordinated with the natural gas efficiency achievable potential study ...
- Energy Conservation Agreement (ECA)
 - ... confirm the aggregate achievable electricity savings for all distribution companies in the province by December 31, 2020 and the allocation of that aggregate achievable electricity savings to the LDCs ...
 - ... will be binding on the parties for purposes of establishing the “MTI Threshold” ...

2016 APS Objectives

- Develop an estimate of LDC-aggregate and LDC-specific achievable potential between 2015 and 2020 to inform the mid-term review of the 2015- 2020 CFF and to provide insights to assist LDCs with program planning and design; and
- Develop a 20 year provincial achievable potential forecast to inform long term resource planning and energy efficiency program design

2016 APS Results (TWh)



	2035 (Dx + Tx)	2020 (Dx only)
■ EE	17.8	6.4
■ BMG	1.6	1.0

* Achievable Budget Constrained Scenario

2016 APS Lessons Learned

Worked well

- Engagement / Working Group
- Transparency
- Bottom up methodology
- LDC Profiles

Opportunities for improvement

- Amount of time for review and QA/QC
- Integration (separate BMG analysis, Gas APS)
- Achievable scenarios
- More dynamic / adaptable model

2019 APS Overview

- To be complete by June 2019
 - Contingency: 2 months
 - Study Time: 12 months (April 2018)
 - Procurement: 3 months (Jan 2018)
- Ongoing preparatory work
 - Stakeholder dialogue
 - Best practices research/jurisdictional scan
 - Residential end use survey
 - Data procurement (MPAC)

Level of Integration

Fully integrated APS

Electricity

Gas

Other fuels

GHGs

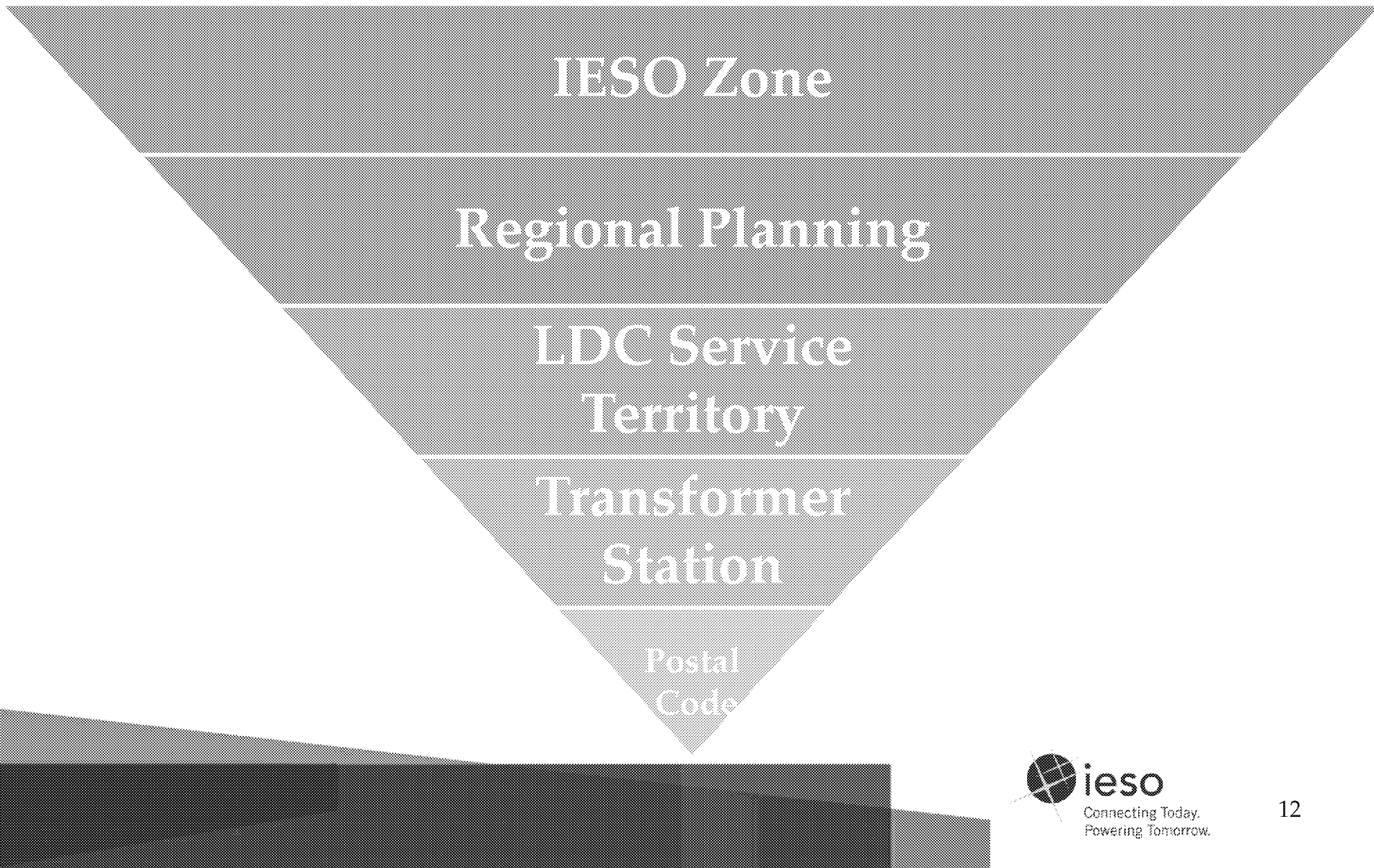
Electricity APS

Gas APS

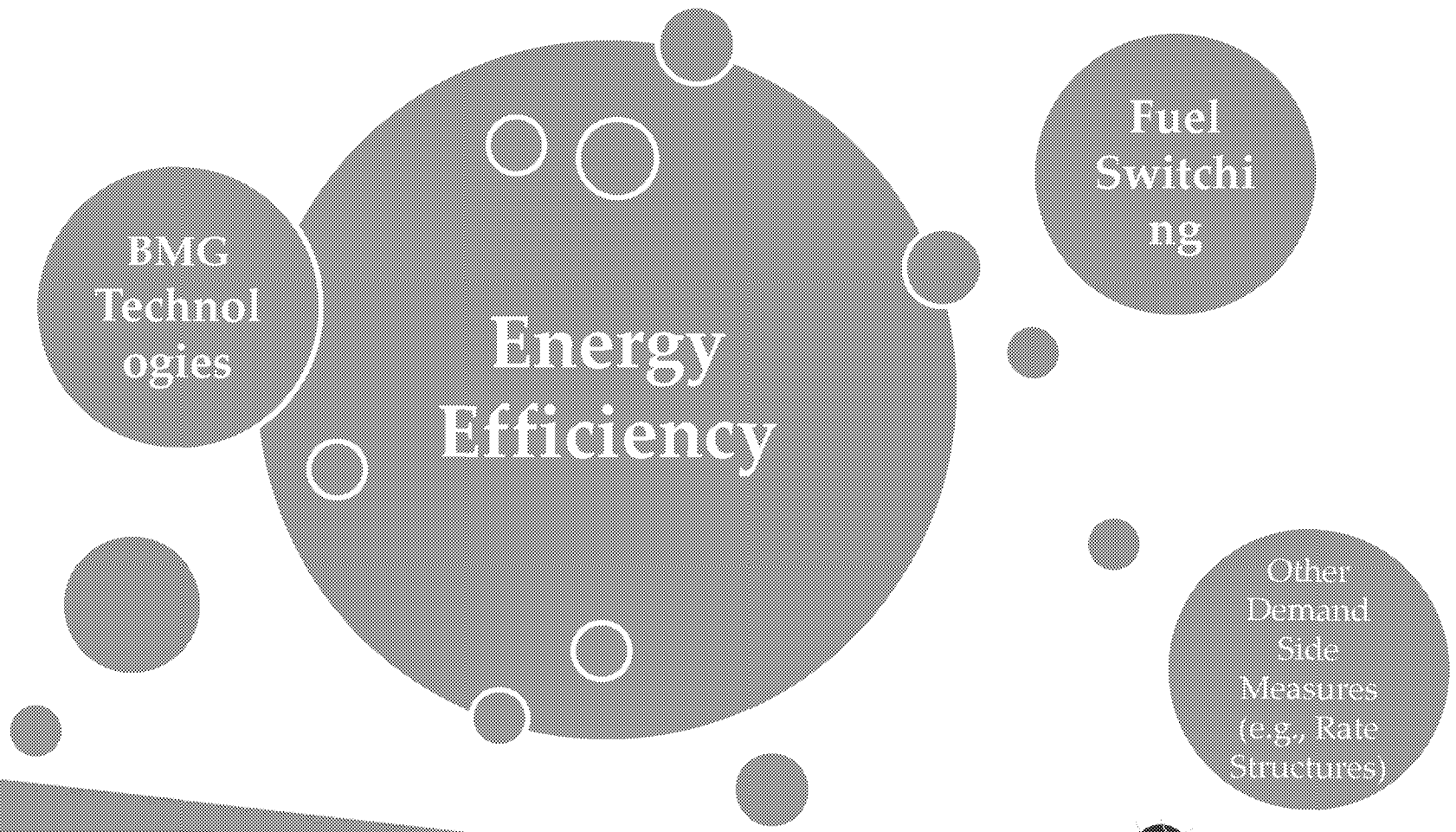
Other Studies

- Other Fuels
- GHG

Level of Granularity



Scope of Measures



Timeframe

Short Term
(5 Years)

• 2021-
2025

Long Term
(20 years)

• 2021-2040

Discussion Questions

- What are the objectives for the next APS?
- What are the desired outputs and how can they be used?

Long-, mid- and
near-term forecasts

Target setting
(short-term and/or
long-term)

Identify
Regional/local
potential

Cost curves

Program design &
planning

Scenario modeling

New and emerging
technology review

???

Next Steps

- Complete research activities (Q4 2017)
- Form Advisory Group (Q4 2017)
- Develop draft project plan (Q4 2017)
- Finalize scope of work and initiate procurement (Q1 2018)

Rooftop Solar Potential Study

Rooftop Solar Potential Study

- Study Objectives:
 - Assess potential of rooftop solar PV in the short term (2018 – 2020) and medium term (2021 – 2025)
 - Disaggregate results by:
 - Customer Sector: Residential, Commercial, Institutional, Industrial
 - Geography: LDC service area, IESO zone
 - Customer rate group: RPP, Class A, non-RPP Class B
 - In regard to rooftop solar thermal:
 - Estimate technical potential and assess customer economics for solar hot water technology.
- DNV GL has been retained to conduct study

Rooftop Solar Potential Study - Activities

1. Project Plan
2. Economic Model
3. Market Scan
4. Consumer Preferences
5. Technical Assessment
6. Potential Analysis
7. Reporting

Schedule

- Draft Results – Dec 2017
- Final Results – Jan 2018
- Report back to Advisory Group – Feb 2018

Questions

