

Joint CCQTA/COQA Meeting CCQTA & Alberta Energy Linkages

Prepared by Alberta Energy

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Agenda

- Alberta Energy
- Internal and External Linkages
- CCQTA Linkages to Oil Sands Royalty
- CCQTA Linkages to Market Access
- Business Priorities (2015-18)
- Summary of CCQTA Benefits
- Questions

Disclaimer

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Any questions about this presentation should be directed to:

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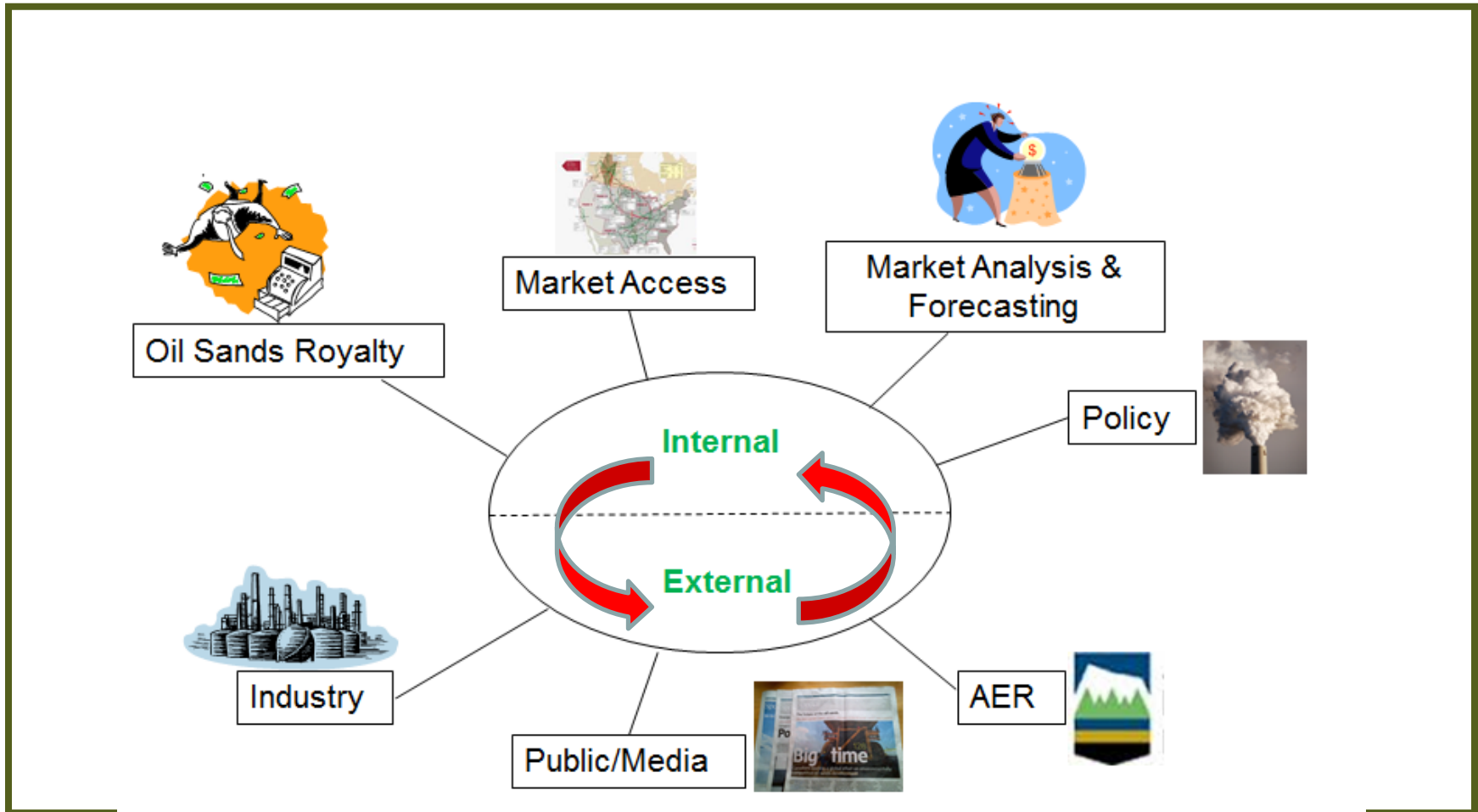


Alberta Energy

- Develop policy for and manage development of Alberta's non-renewable resources and renewable energy.
- Collect revenues from the development of Alberta's energy and mineral resources.
- Advocate market access in key global markets.
- Grant exploration rights.
- Establish, administer and monitor the effectiveness of Alberta's fiscal and royalty systems.
- Promote energy efficiency and conservation.
- Encourage investment in Alberta's energy industry to create jobs and economic prosperity for Albertans.

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Internal and External Linkages



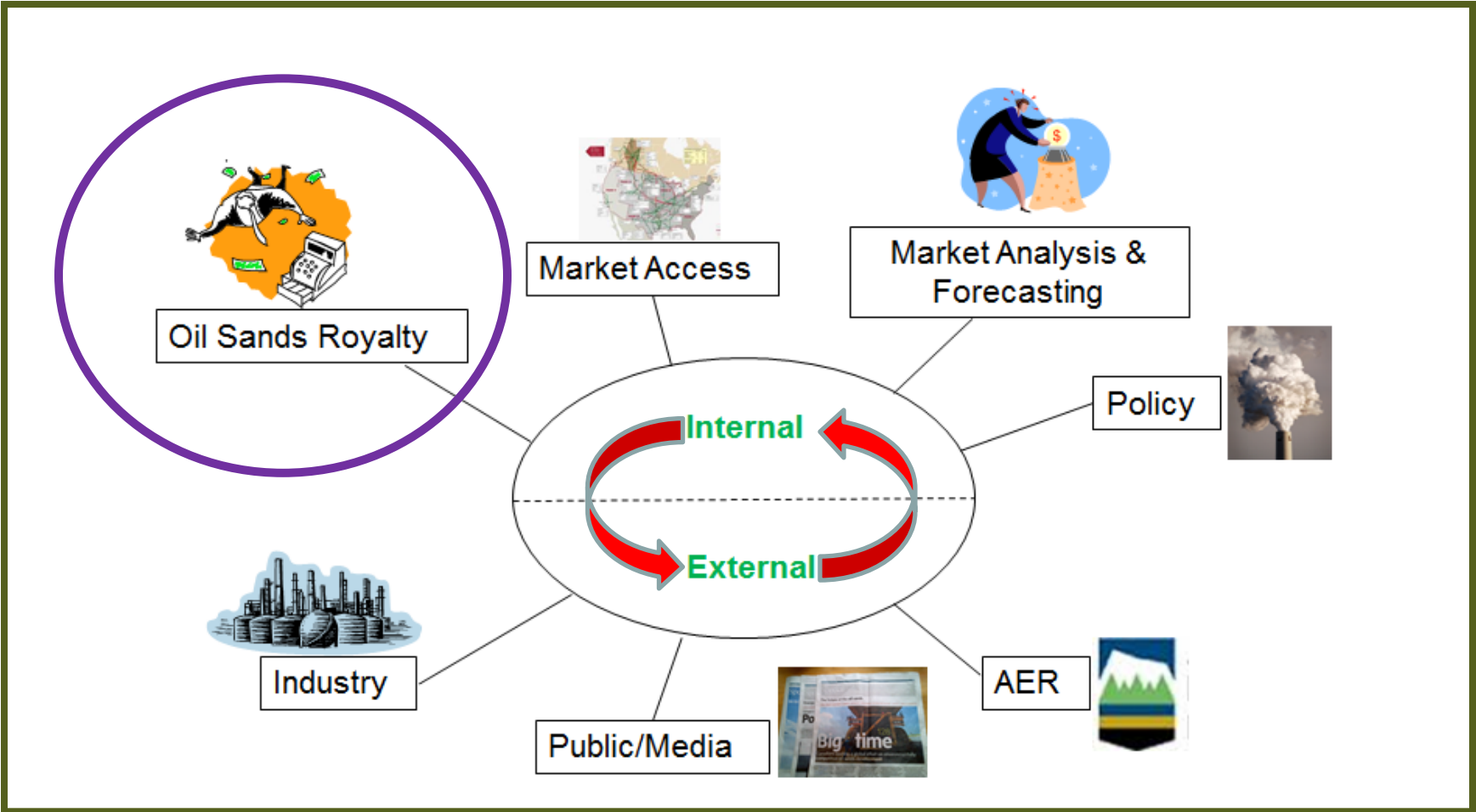
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CCQTA Project Participation

1. Crude Oil Flammability
2. Heavy Oil Compatibility/Stability
3. TAN
4. Condensate Quality
5. Oil Sands Processability
6. Bitumen Dewatering and Volumetric Correction
7. TVP-RVP
8. Pipeline Corrosion
9. H₂S PVT
10. Properties of Thermally Process Materials
11. Bitumen & Diluent Blend Viscosity



Internal and External Linkages



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Oil Sands Royalty

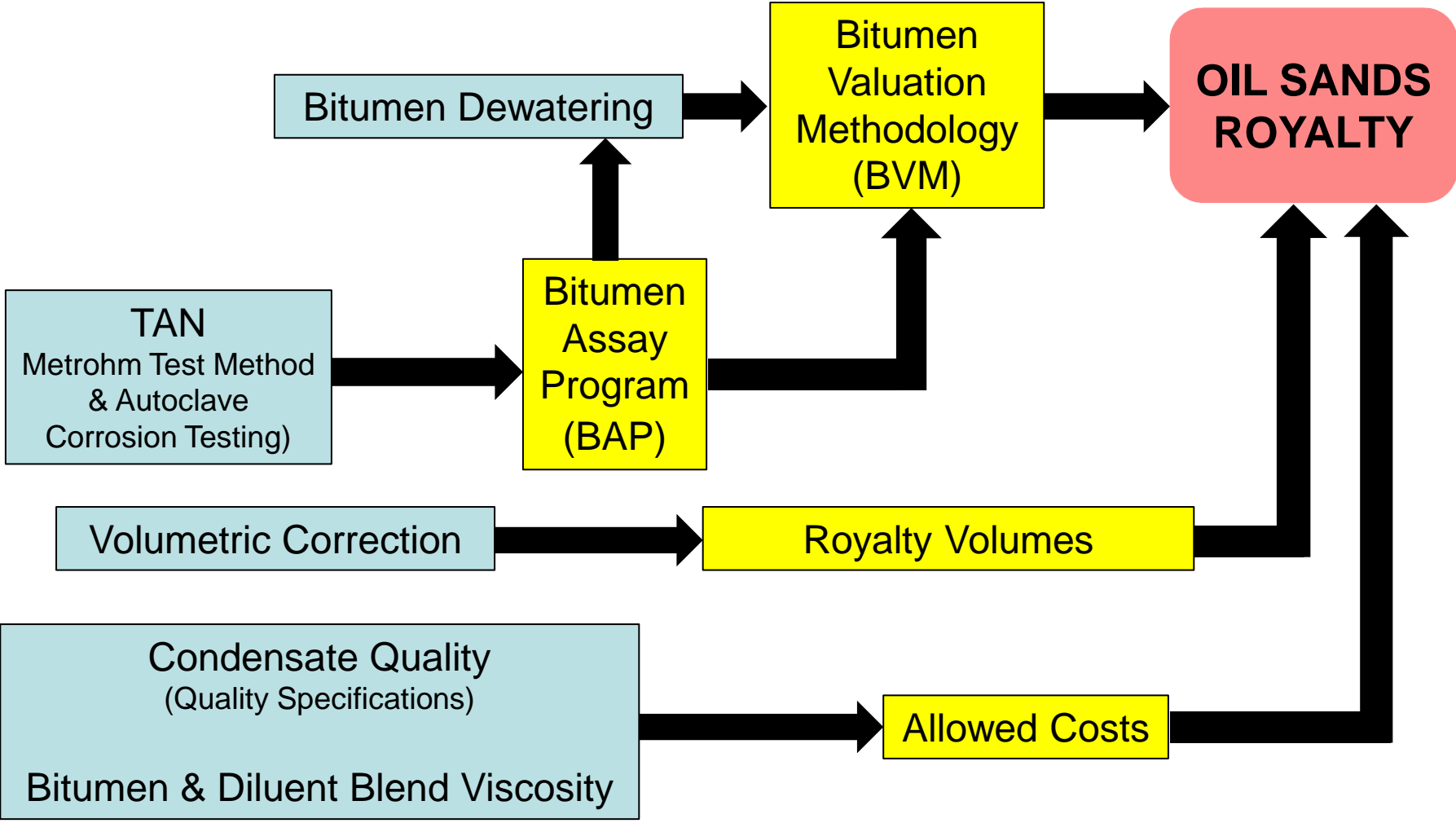
- Majority of Oil Sands owned by Alberta.
- Royalty collected on bitumen.
- 2.5 million bpd bitumen produced (2015).
- ~\$5.1 billion in bitumen royalties for 2014-15 (56% of all royalty revenue – Alberta Energy 2014/15 annual report).

Bitumen Valuation Methodology (BVM)

- Over 50% of Alberta bitumen is not sold to third parties and considered non-arms length (NAL) transactions
- NAL bitumen is valued with a bitumen valuation methodology (BVM)
- Sole BVM crude quality parameter is bitumen density
- $1\text{kg/m}^3 \sim \$11 \text{ million/year}$ in oil sands royalties (2015)

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CCQTA Linkages to Oil Sands Royalty



Bitumen Assay Program (BAP)

- Objective is to generate detailed assays of bitumen obtained from Alberta's oil sands projects
- Assays shared with operator for review and feedback.
 - Maxxam Analytics and CQI successful vendors in RFP process.
- Generated 47 oil sands project assays to date.
- Aggregate assays based on:
 1. oil sands region, and
 2. technology
 - Publically available on Alberta Energy website.

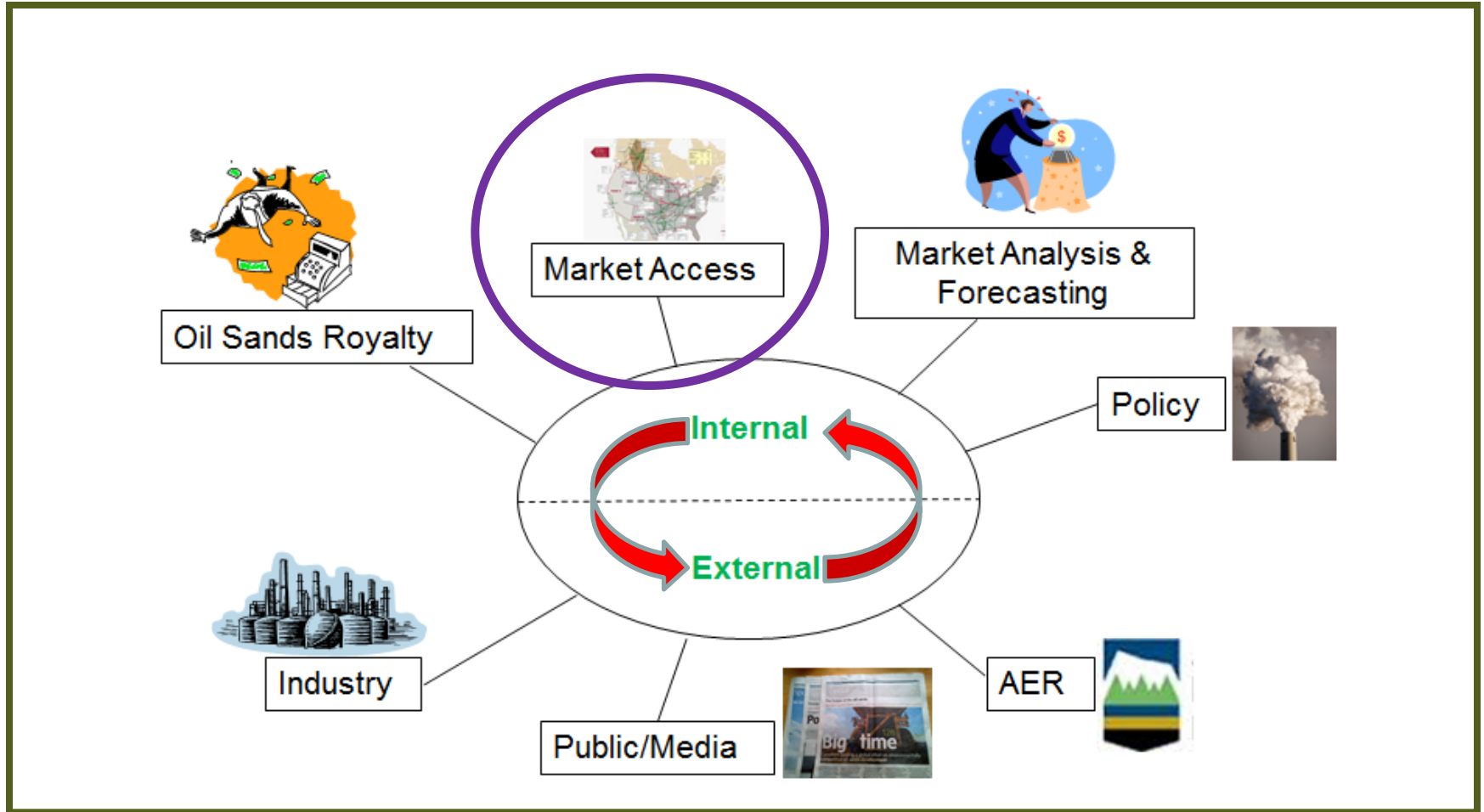
<http://www.energy.alberta.ca/Initiatives/1439.asp>



Key Oil Sands Royalty Focus Areas

- Oil Sands Royalty Review
 - Should alternate crude benchmarks be considered?
- BVM Regulation Review
 - Should other crude qualities be incorporated into BVM?

Internal and External Linkages



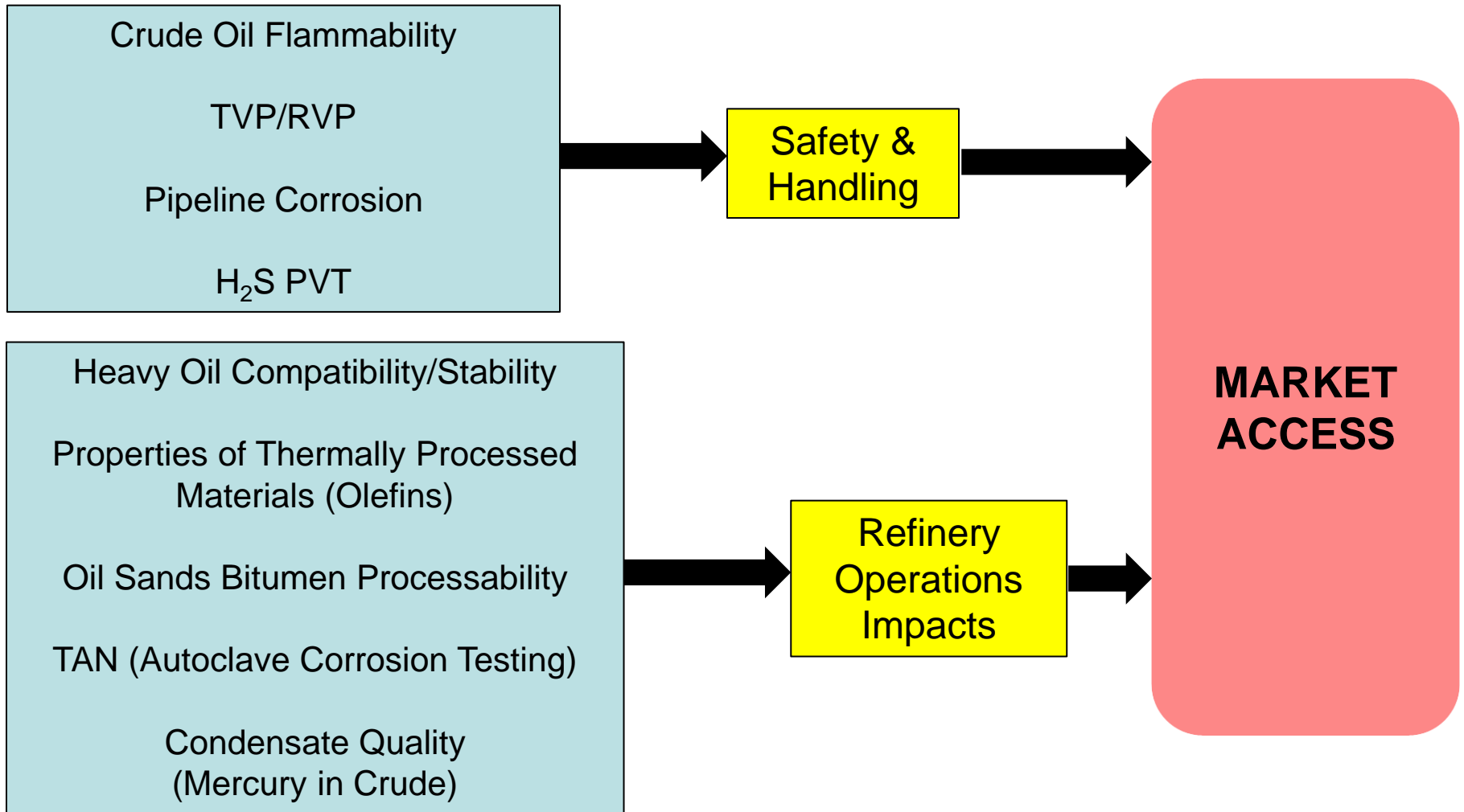
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Market Access

- 1 \$US/bbl increase in light-heavy oil price differential ~ decrease of \$70 million revenues (Alberta 2016-19 Fiscal Plan)
- Upstream GHG emissions estimates for:
 - Enbridge Pipelines Inc. Line 3 Replacement Program
 - Kinder Morgan Trans Mountain Pipeline Expansion Project
 - TransCanada Energy East Pipeline Project
- Key market access issues include:
 - Safety & Handling
 - Environment



CCQTA Linkages to Market Access



Key Market Access Focus Areas

- Safety & Handling
 - Lac-Mégantic disaster
 - Pipeline corrosivity
 - Oil spill response
- Refinery Operations Impacts
 - Partial upgrading
 - Refinery corrosion
 - Mercury in crude

Business Priorities (2015-18)

- 1. Albertans benefit from responsible energy and mineral development and access to global markets**
 - Oil Sands Royalty Review
 - Market Access
- 2. Effective stewardship and regulation of Alberta's energy and mineral resources**
 - Oil Sands Regulation
 - GHG Policy & Implementation
- 3. Albertans benefit from safe and reliable energy-related infrastructure and innovative energy technologies**
 - Value-Added Technologies

Summary of CCQTA Benefits

- Enhanced knowledge of oil sands resource
- Network of technical experts and access to information
 - Provides technical input to market access issues (e.g., GHG intensity studies)
 - Provides technical input to Alberta oil sands regulation reviews (e.g., BVM)
 - Provides technical input to environmental performance standards (e.g. *Alberta Climate Leadership Plan*)

