

Energy Data in Canada:

Informing & Guiding Systems Change



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CESAR
CANADIAN
ENERGY SYSTEMS
ANALYSIS RESEARCH



With special
thanks:




Why Energy Data?

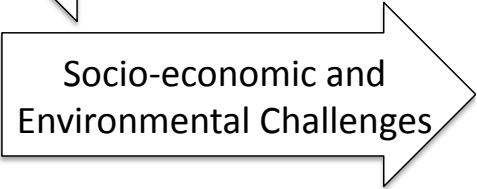


We live in a world of rapid change:

- Arising from outside government
- Government addressing problems



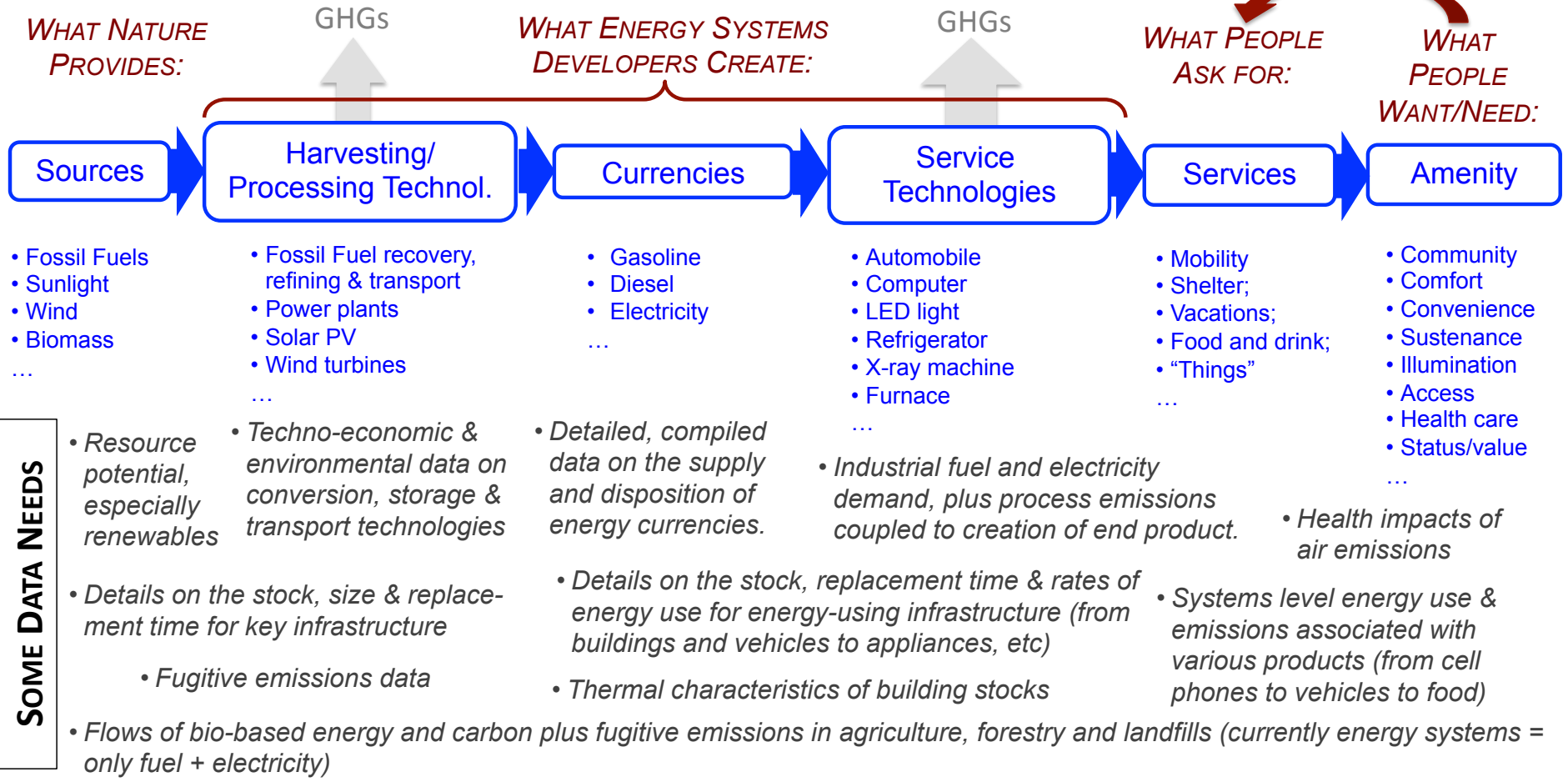
Technology, Business
Model & Social Innovation



Socio-economic and
Environmental Challenges

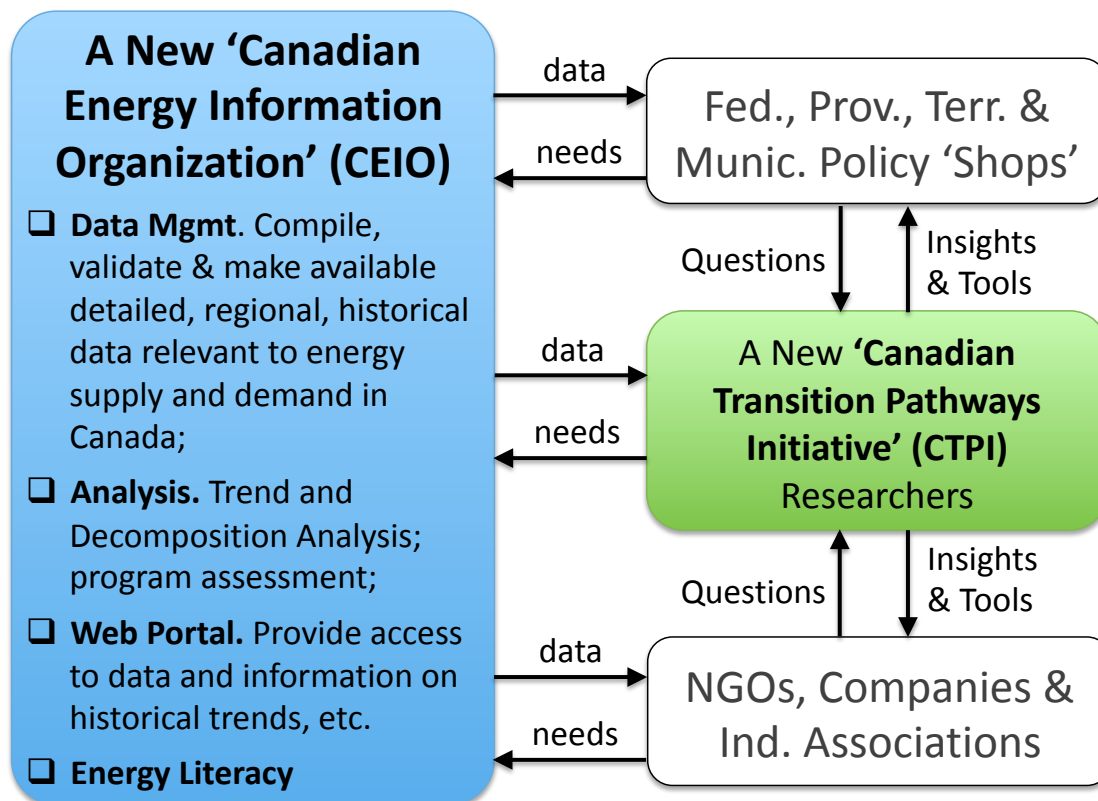
*High quality data is required for
the critical analysis and modeling to
inform policy and investment decisions.*

Shortcomings of Energy Systems Data



Proposed Energy Data Ecosystem

Products for Climate Change, Innovation
& Economic Development Policy



- ❑ Assess Policy Options;
- ❑ Assess progress of existing policies & programs;
- ❑ Define **Credible, Compelling** Pathways **Capable** of achieving targets for CC & economic prosperity;
- ❑ Build interest, enthusiasm about transitioning to a 'better tomorrow';
- ❑ Train highly qualified personnel in analysis & modeling of systems change;
- ❑ RD&D Priorities;
- ❑ Improve energy literacy.

Recommendations for CEIO

Canadian Energy Information Organization

Vision, Mission & Values

- High quality, coherent, regional & national energy data supports evidence-based policy and investment decisions needed to address climate change and provide economic prosperity;
- Support analysis and modeling efforts done elsewhere;
- Open access (where possible), accurate, reliable, trustworthy, non-controversial, non-political;

Governance

- Closely linked to government departments with authority to collect data;
- Governance model that engages provinces, territories & industry associations providing data, as well as the users of the data;

Activities

- Maintains a staff to compile, validate, analyze and report on energy data (including fuels, electricity, food and fibre);
- Significant effort is invested in understanding and responding to the needs of data users
- Focus is historical data and trends: does not do forecasting, scenarios, optimization modeling
- Web portal provides data access,
- Possibly partners with science centres / educational groups to enhance energy literacy

Funding

- Federally funded; Provinces and industry contribute data

Recommendations for CTPI

Canadian Transition Pathways Initiative

Vision, Mission & Values

- Towards collective, positive visions for systems change that will meet socio-economic and environmental objectives
- Define & characterize **Credible, Compelling** Pathways **Capable** of achieving societal objectives, including - but not limited to - greenhouse gas management;
- Interdisciplinary, innovative, forward thinking, evidence-based, engaged with industry, gov'ts

Governance

- Freestanding, NFP research foundation with an independent management board;
- Governance model that engages and encourages industries, governments, NGOs, and academics to explore exciting visions for systems change that can achieve societal goals

Activities

- Majority of funds to support transition pathway development in regions, sectors, etc;
- Small staff complement would (a) build multi sector, multidisciplinary networks around credible, compelling visions, and (b) create powerful, open-access modeling tools;
- Workshops, conferences, competitions for grants & contracts, web and multimedia presence;
- Spin off consortia of companies working to realize Transition Pathways.

Funding

- Core federal funding with 10 year commitment; Provincial and Industry funding of specific projects

Energy Data is Essential for Defining Transition Pathways



PATHWAYS must be:

1. CREDIBLE

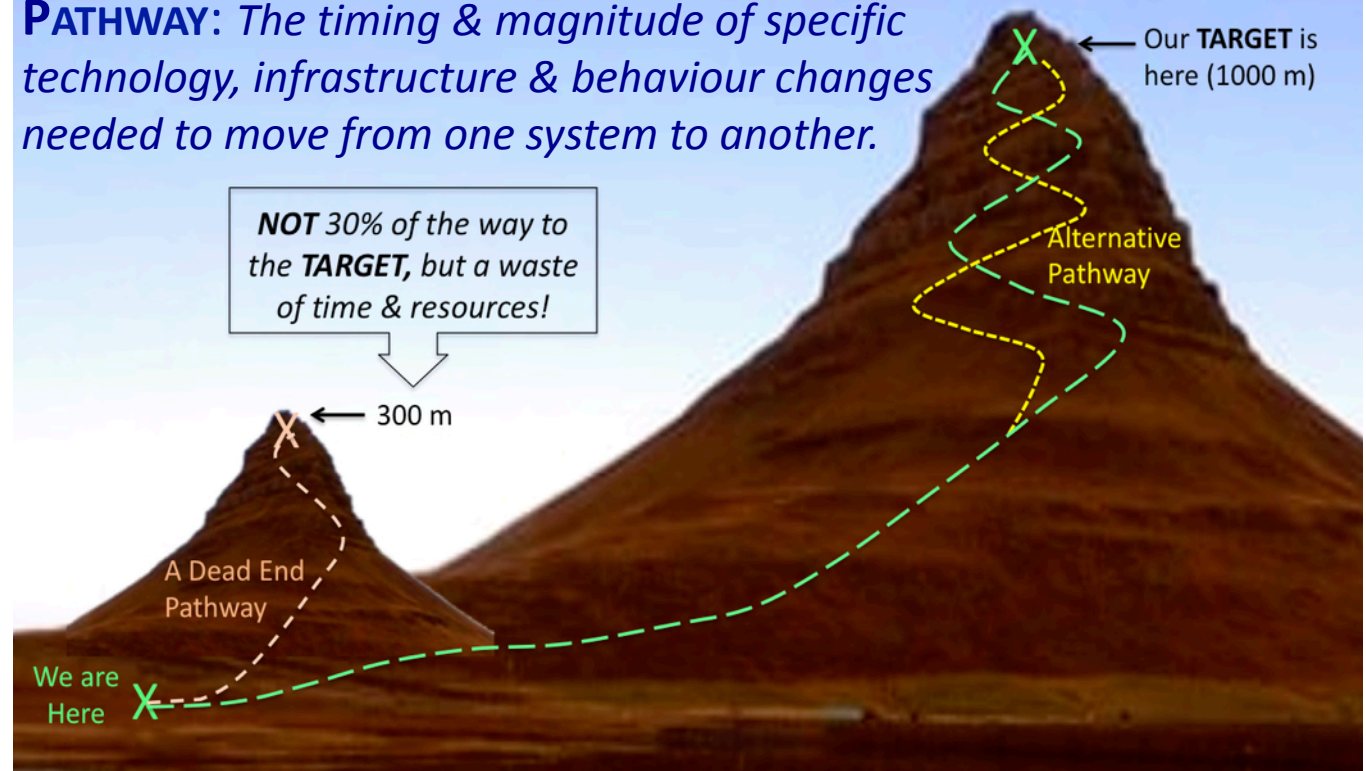
- ☐ Technically, economically, socially

2. COMPELLING

- ☐ Desirable by key stakeholders

3. CAPABLE of achieving the target.

PATHWAY: *The timing & magnitude of specific technology, infrastructure & behaviour changes needed to move from one system to another.*



Kirkjufel Mountain (Iceland) in two sizes. Modified from https://www.west.is/static/toy/images/Place_308_3_Selected.jpg



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Thank You!

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