

CGA Energy Nexus & Annual Technical Conference 2024

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Canadian Low-Emission Energy Registry

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- Overview
- Registry 101
- Current Status

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Unlocking Canada's Low-Carbon Energy



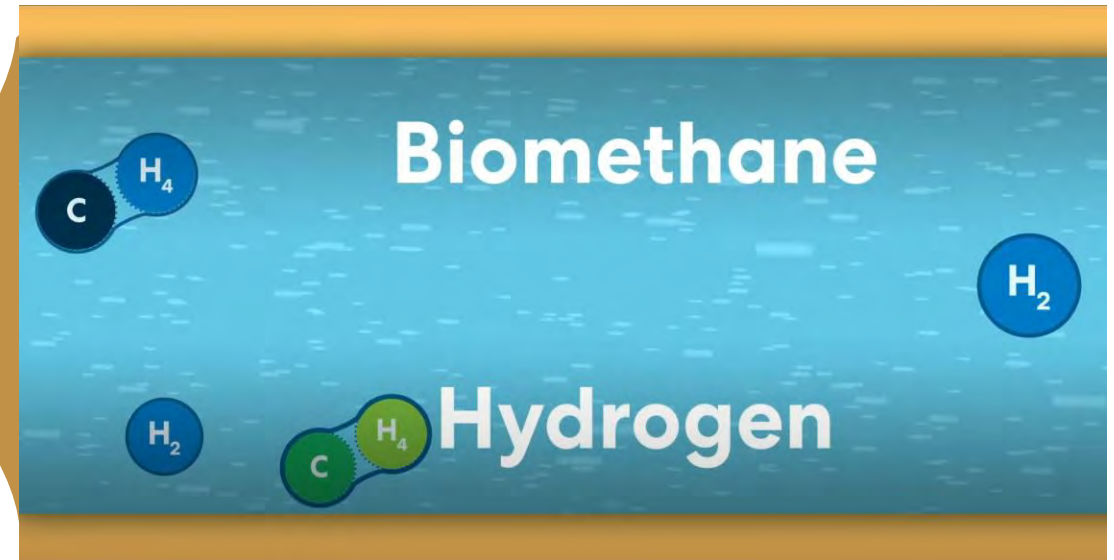
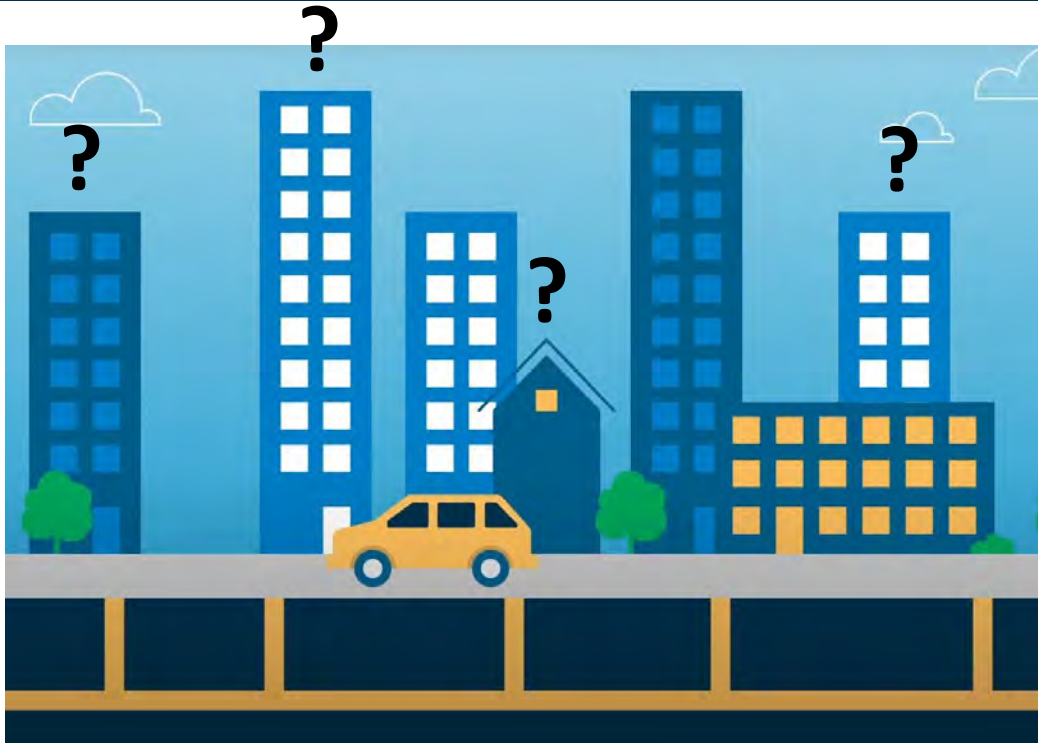
Canada's natural gas industry is committed to reducing its environmental footprint.

One way is by blending lower-emissions energy into regular natural gas streams.

This includes biomethane, and hydrogen, both of which have lower emissions than natural gas.

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C Canadian

Low-emission energy produced or imported into Canada.

L Low

E Emission

Biomethane and other forms of low-emission energy such as hydrogen.

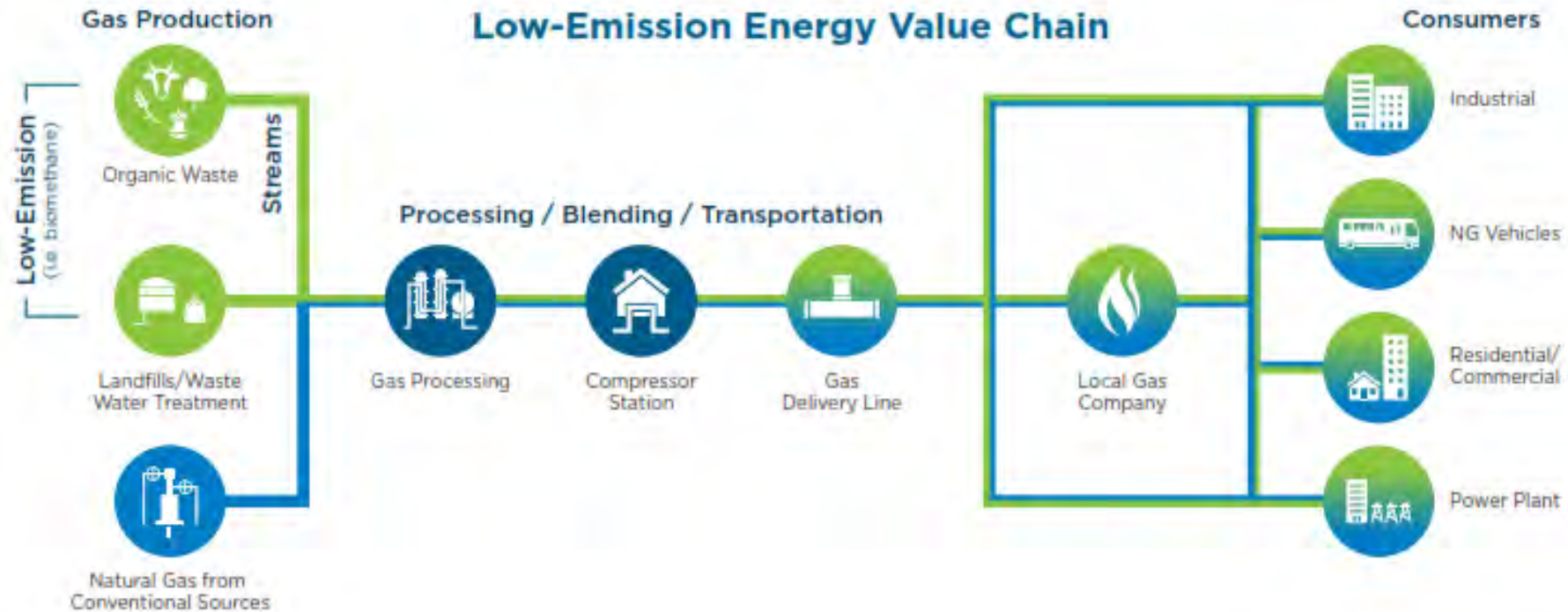
E Energy

R Registry

Registry tracks movement of low-emission energy from producer to end user in a transparent, verifiable, integrated manner.

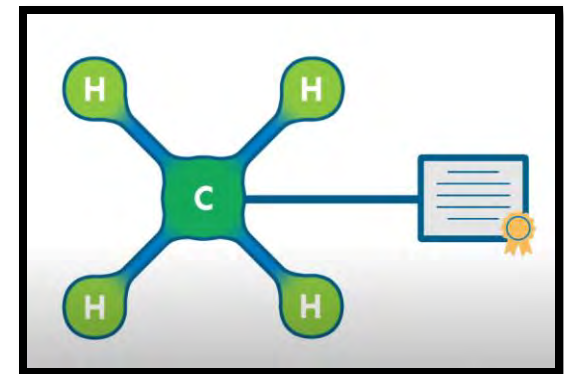
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The CLEER establishes a Book-and-Claim system of custody transfer of the environmental attributes of biomethane.

Environmental Attribute Certificate (EAC)



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Current State



PNG, Enbridge, Energir, FortisBC have introduced biomethane on their systems.



Utility-specific processes track supply and disposition



Some regulators/policy makers are skeptical of integrity of the transactions.
Concerns about duplicated sales, duplicated claims environmental attributes

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Vision



The CLEER is the central repository of production data from all low-emission energy produced in, or delivered into, Canada.



The CLEER provides a rigorous, transparent, and verifiable quantification and tracking of the environmental attributes associated with the production and consumption of low-emission energy.



The CLEER promotes the adoption of low-emission forms of energy for heating homes and businesses, and powering industry.

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Additional Products



Hydrogen



Mitigated Gas: Natural gas matched with carbon removals through CO2 capture, sequestration, or utilization.



RSG: Natural gas produced using industry leading practices that lower the methane emissions associated with production.



Thermal Energy: solar-thermal, geothermal, geo-exchange.

Broader Integration and Acceptance

Highlight the credibility and integrity of the CLEER and advocate for acceptance in policies, regulations, and standards.

Increase the recognition and acceptance of low-emission energy as a source of emissions reductions.

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Goals

Increase trust amongst regulators and government, and customers, of biomethane as a source of low-emission energy.

Transparency on claims of environmental attributes associated with supply and consumption of biomethane.

Link biomethane supply to emissions reductions.

Expand the market for biomethane.

Source of data for project developers, decision and policy makers.

Facilitate transactions between suppliers and off-takers.

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Project Deliverables

IT platform and Registry: “Software-as-a-Service” (SaaS) provider.

Governance: Rules around certifying production facilities and production volumes.

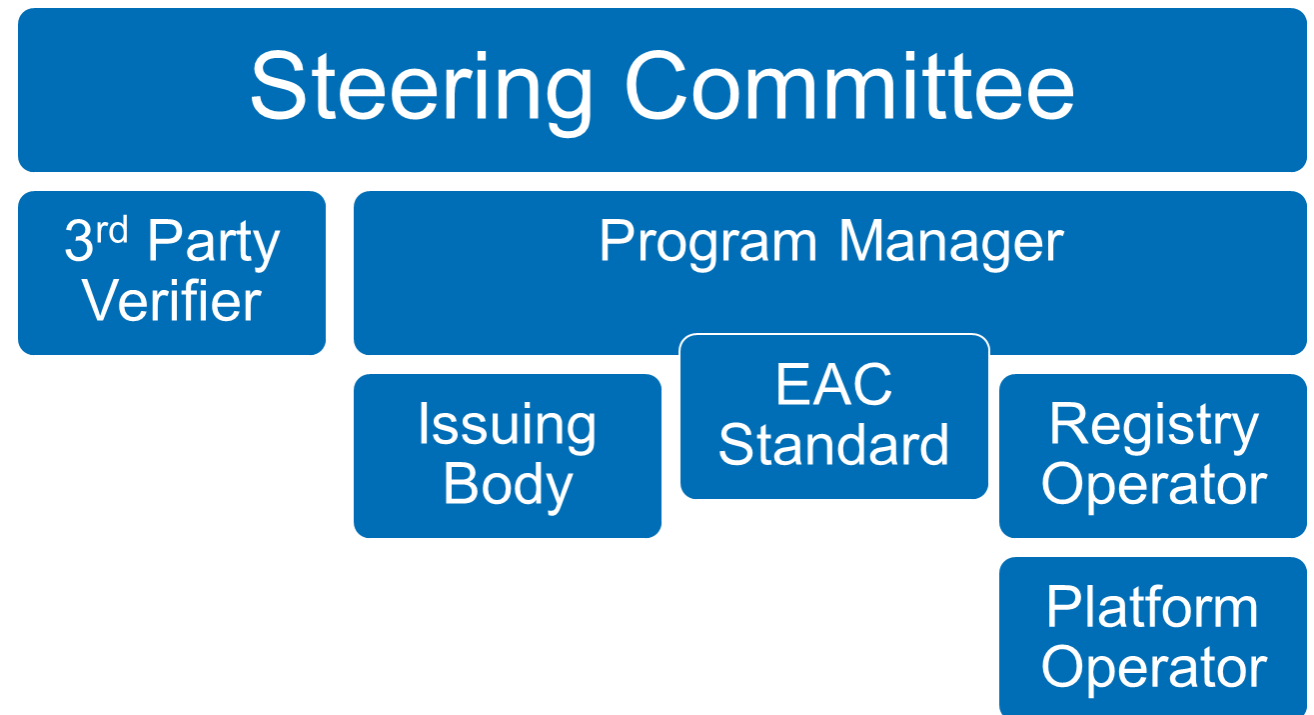
Measurement and Verification: Third Party audit of production and governance of the CLEER.

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Governance

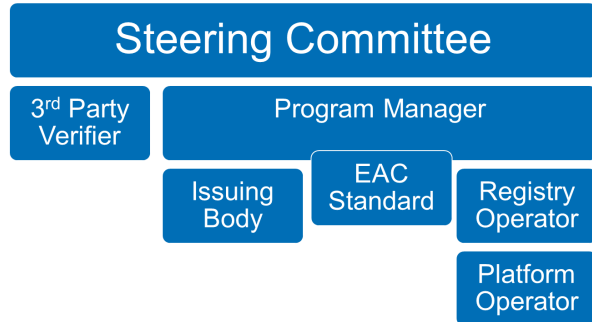
- Rules and processes that govern the environmental attributes of biomethane across its entire life cycle.
- Separation of roles and responsibilities:
 - Program oversight
 - Issuance
 - Registry Operator
 - 3rd party verification



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EAC Standard

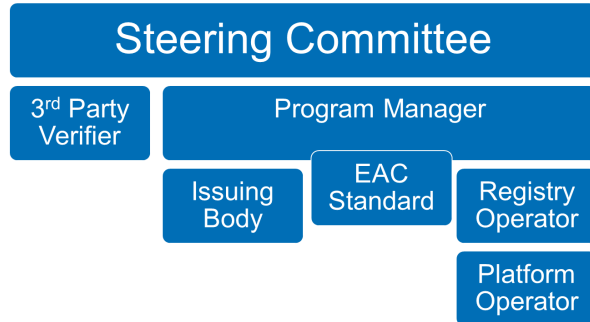


- Specifies the requirements that must be met for registering a production facility and how that production must be measured and validated.
- When, how and with what information EAC's can be issued to ensure the uniqueness of each EAC (i.e. energy source, capacity, location, year operational).
- Sets out how EAC's are transferred and redeemed (retired) by, or on behalf of, an end-user.
- Define the rules under which end-users can claim an EAC, and when an unclaimed EAC should expire from use.

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Platform & Registry



IT Platform

- Functionality to record and track biomethane supply.
- Security model (users and user groups and access rights).
- Data integrity, data management and reporting.

Enforces the EAC Standard

- How biomethane certificates are created, transferred and retired.
- Tracking of physical supply or only certificates.
- Registration of users.

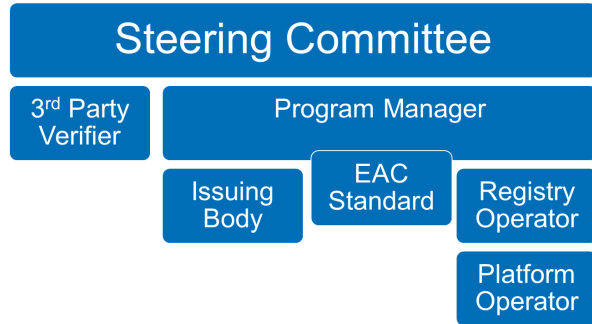
Record and maintain transactions

- History available for reporting, control, audit and verification.

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Issuing Body

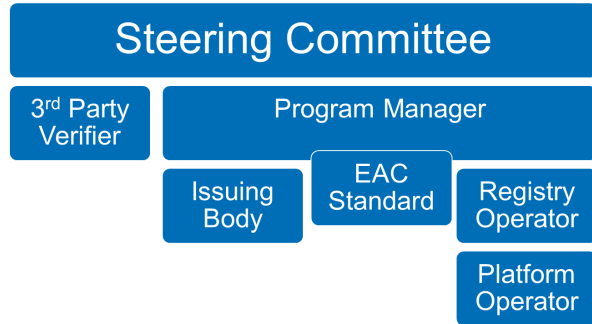


- Responsible for the issuance and tracking of EAC's.
- Often, an Issuing Body is a grid operator, energy regulator or other (semi) public entity.

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Program Manager



- Authorization of Issuers.
- Maintenance of procedures and governance arrangements.
- Overall compliance with the Program.

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Stakeholders

Utilities

- PNG
- FortisBC
- Enbridge
- Energir
- Gazifere

Industry Organizations

- CGA
- Canadian Energy Partnership for Environmental Innovation (CEPEI)
- Canadian Biogas Association

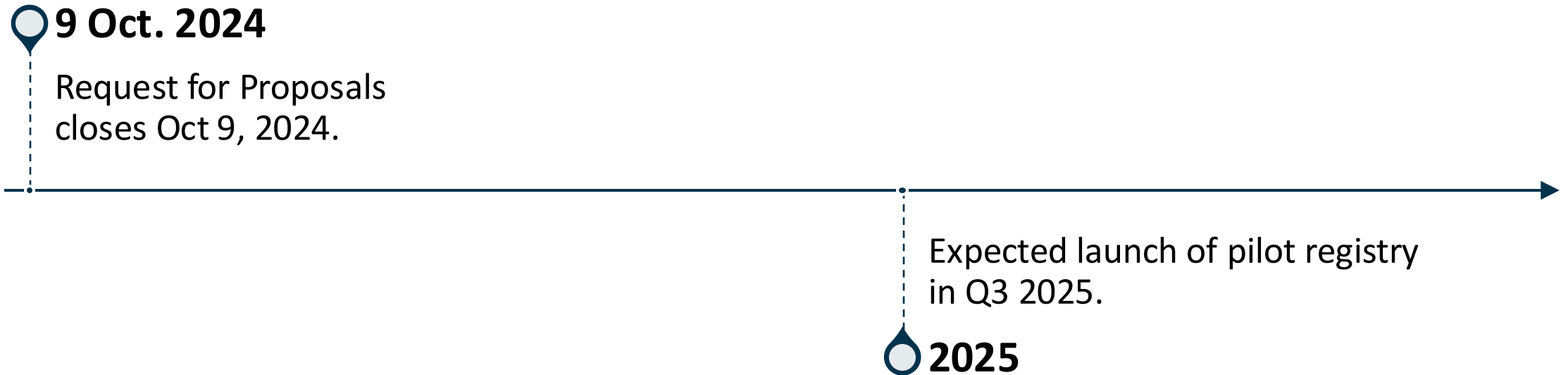
Government

- NRCan
- ECCC
- BC EMLI
- BC Min Env
- Quebec Min Env

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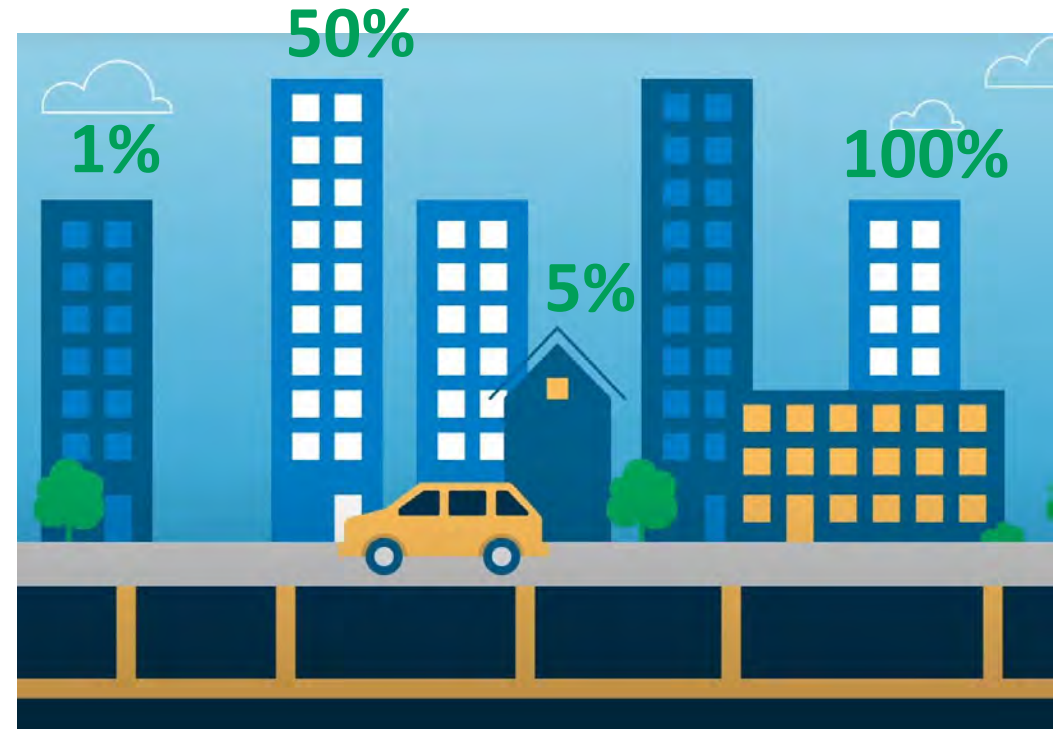
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Schedule



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Questions & Discussion

Learn more? Contact

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