

CSA Group

Standards-based Solutions in
Support of Technology
Commercialization



**CSA
Group**

BIOCLEANTECH Forum 2016

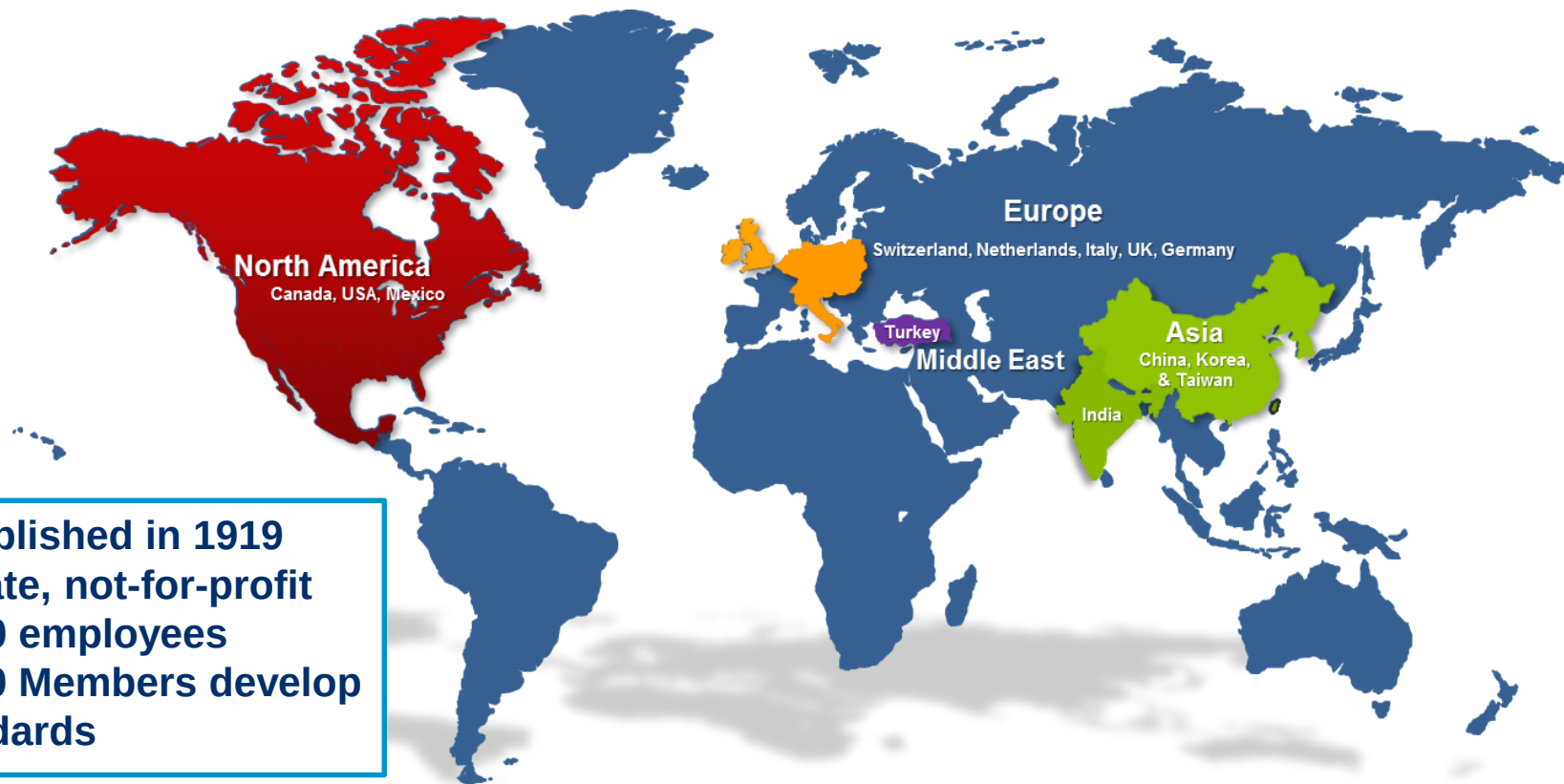
Ottawa, Canada

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- CSA Group
- Standard Development System
- Transforming Technology Innovation into Tangible Results and Marketable items
 - Environmental technology verification (ETV)
 - GHG Project Accounting
 - CSA Registries
 - Reduction of fugitive and vented emissions
 - CSA offerings supporting industry
- Summery

Overview of CSA Group



- Established in 1919
- Private, not-for-profit
- 1,800 employees
- 8,000 Members develop standards

**Consumer
Product
Evaluation**

Standards

**Product
Certification
& Testing**

Standards Development



54

Areas of
technology

3,000

Standards and
codes

8,000

Expert committee
members

National & International Standards Systems



**CSA
Group**

Standards Development

- We develop standards designed to:
 - enhance public safety and health
 - advance the quality of life
 - help to protect the environment
 - facilitate trade
- CSA's standards development process is **accredited** in Canada by Standards Council of Canada (SCC) and in the U.S. by American National Standards Institute (ANSI)

CSA and International Standards



- **National Technical Committees**

- Develop National Standards of Canada
- Formal Balanced Matrix
- Voting members
- Administered by an Accredited SDO
 - Under SCC
- Adopt ISO Standards into Canada as National Standards of Canada



- **National (ISO) Mirror Committees**

(“Standards Council of Canada Mirror Committee (SMC)”)

- This IS Canada’s voice at ISO Table
- No formal matrix, although balanced representation is maintained
- Canadian Delegation and leadership positions come from SMC
- Often harmonized with Technical Committees

1. Committee Chair
2. Project Manager/
Committee
Secretary
3. Voting & Non-
voting Committee
Members*
4. Observers / Guests



* Variations among Committee Structures

- 1. Members develop the content – CSA facilitates the process**
- 2. Adoption of international standards where feasible**
 - CSA and members participate in international standards work (IEC / ISO)
- 3. Opportunity for industry & public input**
 - Notice of Intent/Public Review
- 4. Balance of Representation**
 - Representation from manufacturers, utilities, academia, consumers, regulators and other experts
 - Voting matrix
 - Largest interest group does not out-number the two smallest

CSA Communities of Interest

Welcome to CSA Communities



Connect. Share. Collaborate

Register and discover power of Community:
(<https://community.csagroup.org>)

- Integration of biotechnology in:
 - Environmental Applications;
 - Food and Agricultural Applications;
 - Industrial Applications;
 - and many more



Transforming Technology Innovation into Tangible Results and Marketable Products

- *ETV*
- *GHG Projects & Registries*
- *Fugitive Emissions*
- *CSA Supporting Deliverables*



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- ISO 14034 – Environmental Technology Verification (ETV)
 - ISO 14034 is scheduled to be published in November 2016.
 - Harmonization and implementation to ISO 14034 will begin following the publication of the standard.



Objectives of the Canadian ETV:

- To provide a **reliable** assessment process for verifying the environmental performance claims associated with technologies and technological processes.

Benefits of ETV:

- Differentiates a technology from the competition, providing a company with a distinct market advantage;
- Provides a specific and precise performance claim of the technology, presented in an easily understood format;
- Can expedite permitting and approvals for the use of the technology;
- Can support the patenting process, by providing verified claims.
- Has increasing national and international market recognition.

Directly Applicable to New BioCleanTech!



Environmental Technology Verification

CSA Group is proud to support the introduction of ISO 14034 - *Environmental Technology Verification (ETV)* to the Canadian market.

ETV Process Overview:

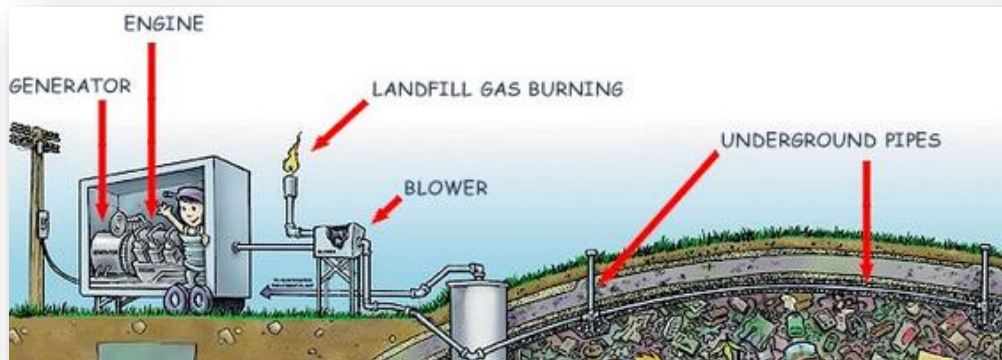
1. Application and Review
2. Verification
3. Reporting & Award

Learn More:

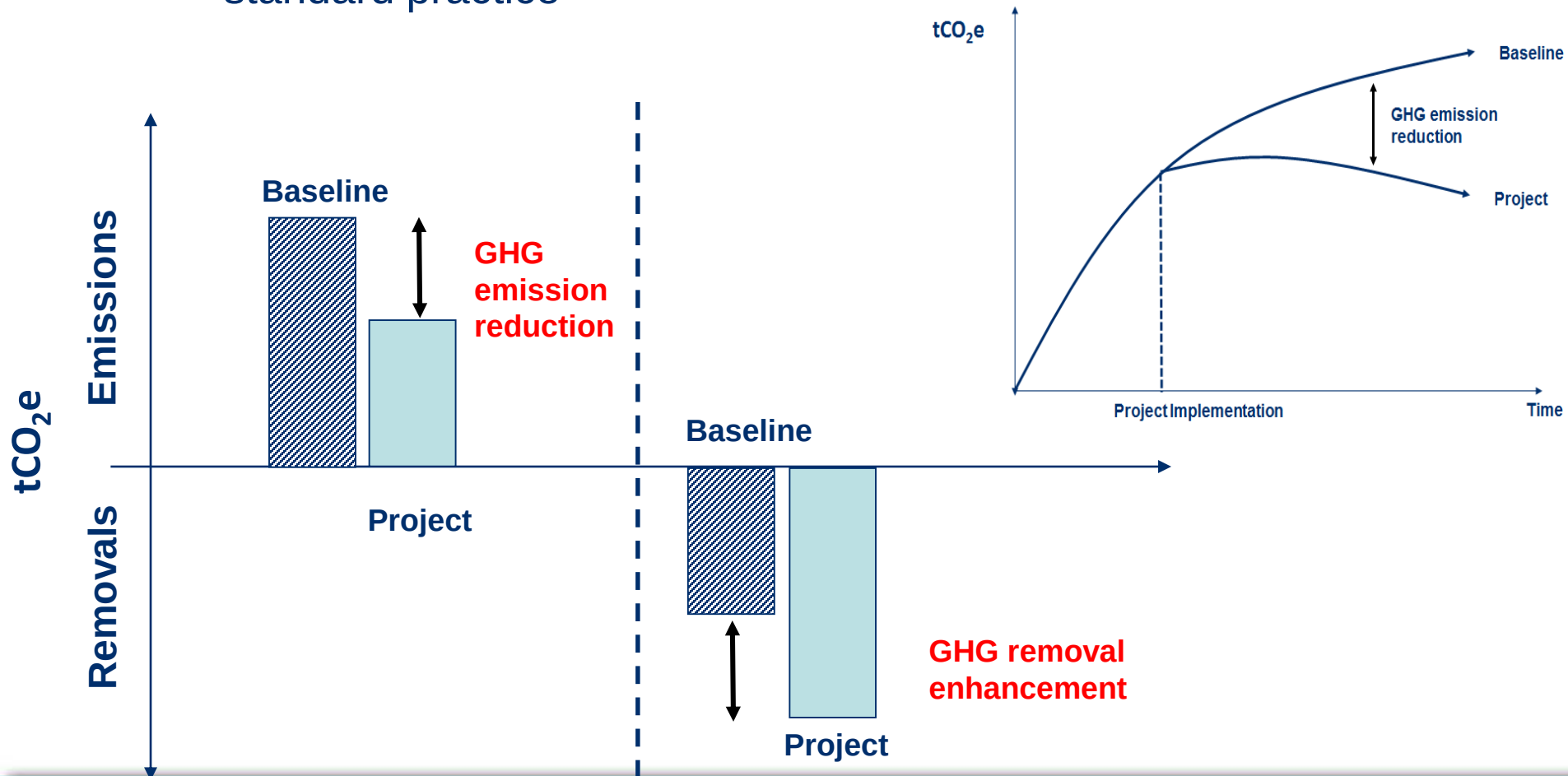
- Join the ETV section of the CSA Communities to learn more about *ISO 14034*, participate in related discussions and receive the latest news. Visit: csagroup.org/communities
- To learn more about the ETV verification process, begin your ETV screening application, or search the inventory of verified technologies please visit: etvcanada.ca/



- Quantification of specific reduction activity
- Projects lead to: “offsets”/“carbon credits”/“verified emission reductions (VERRs)”
- Projects compare before vs. after installation (baseline vs. project)
 - Number of offsets generated based on the actual amount project was able to reduce from business as usual (compared to baseline)



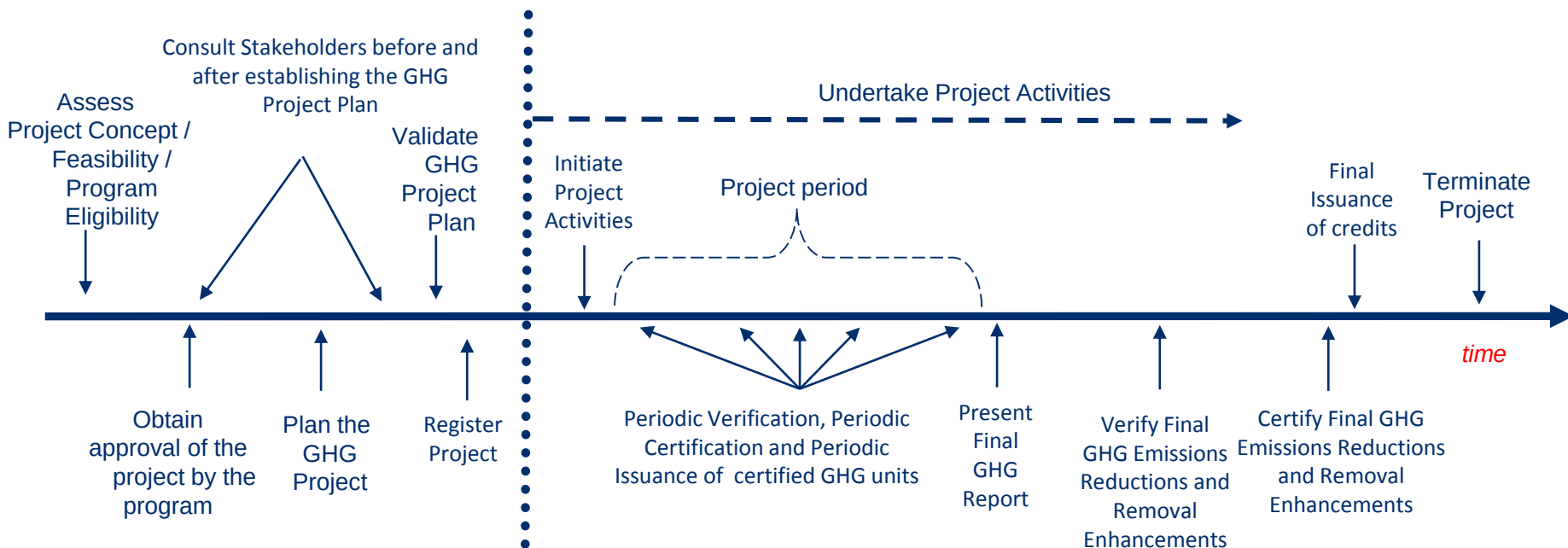
- GHG Project Standards
 - Quantification of GHG reductions from new technology vs. standard practice



Typical GHG Project Cycle & ISO 14064-2

Planning

Implementation



Requirements included in ISO 14064-2

Describe project, Determine Baseline Scenario, and Establish Procedures to Monitor, Quantify and Report GHG Emissions, Removals, Storage, Emission Reductions and Removal Enhancements and Validate the GHG Project Plan

Implement Procedures to Monitor, Quantify and Report GHG Emissions, Removals, Storage, Emission Reductions and Removal Enhancements and Verify GHG Emission Reductions, Removal Enhancements and Reports

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[EPD REGISTRY](#)
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GHG CleanProjects™ Registry

Project Details

Title: Amaizeingly Green Products Facility Project

Project Identifier:
9737-8689

Project Description

Existing corn wet milling process stream for dry starch production has been converted to the state-of-the-art bioethanol production using bioprocess technology. The food products extracted from the existing wet mill process continue to be produced and sold into the food additives market. Project used starch from an existing food processing plant and the liquid starch is used for bioethanol production instead of drying for sale as starch directly. The Project involves the reduction of fossil derived gasoline use through the production and sale of bioethanol to blend with existing gasoline product up to 10%.

Project Files

[GHG Report \(2007-2008\) - english](#)
[GHG Report \(2007-2010\) - english](#)
[GHG Report \(2007-2010\) - english - update](#)
[Verification Report \(2007-2010\) - english](#)

Registry: GHG CleanProjects Registry

Type: Fuel Switching

Status: Active

Authorized Project Contact: LFGC Ltd.

Latitude: 44.497832 [Map](#)

Validator: None defined

Longitude: -80.192061

Verifier: AMEC Americas Limited

Project Proponent: Amaizeingly Green Products, L.P.

Start Date: 2007-07-02

End Date: 2028-07-02

Estimated potential lifetime emission reductions-removals: 2,280,165 t CO₂e

Estimated potential annual emission reductions-removals: 2007 - 21,996 t CO₂e
 2008 - 87,982 t CO₂e
 2009 - 85,545 t CO₂e
 2010 - 22,382 t CO₂e

Serial Number 

VERR
Vintage Year 

Company Name 

Status 

Quantity in
t CO₂e 

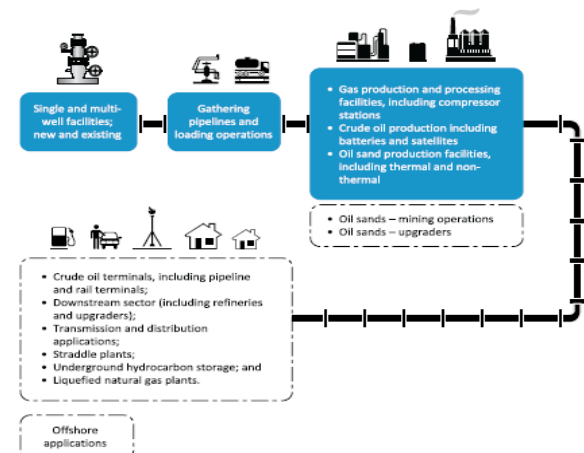
There are no VERRs for this project that have been serialized. Please contact the project developer or authorized project contact.

New – Z620.1 – Reducing Emissions

- Z620.1 – *Reduction of fugitive and vented emissions for upstream petroleum and natural gas industry systems*
- Published July 2016, Z620.1 provides guidance and best practices
- Applies to upstream oil and gas industry from wells, terminals, and facilities
- Applies to unintentional / intentional hydrocarbon gas releases to the atmosphere (often referred to as fugitive / vented emissions)

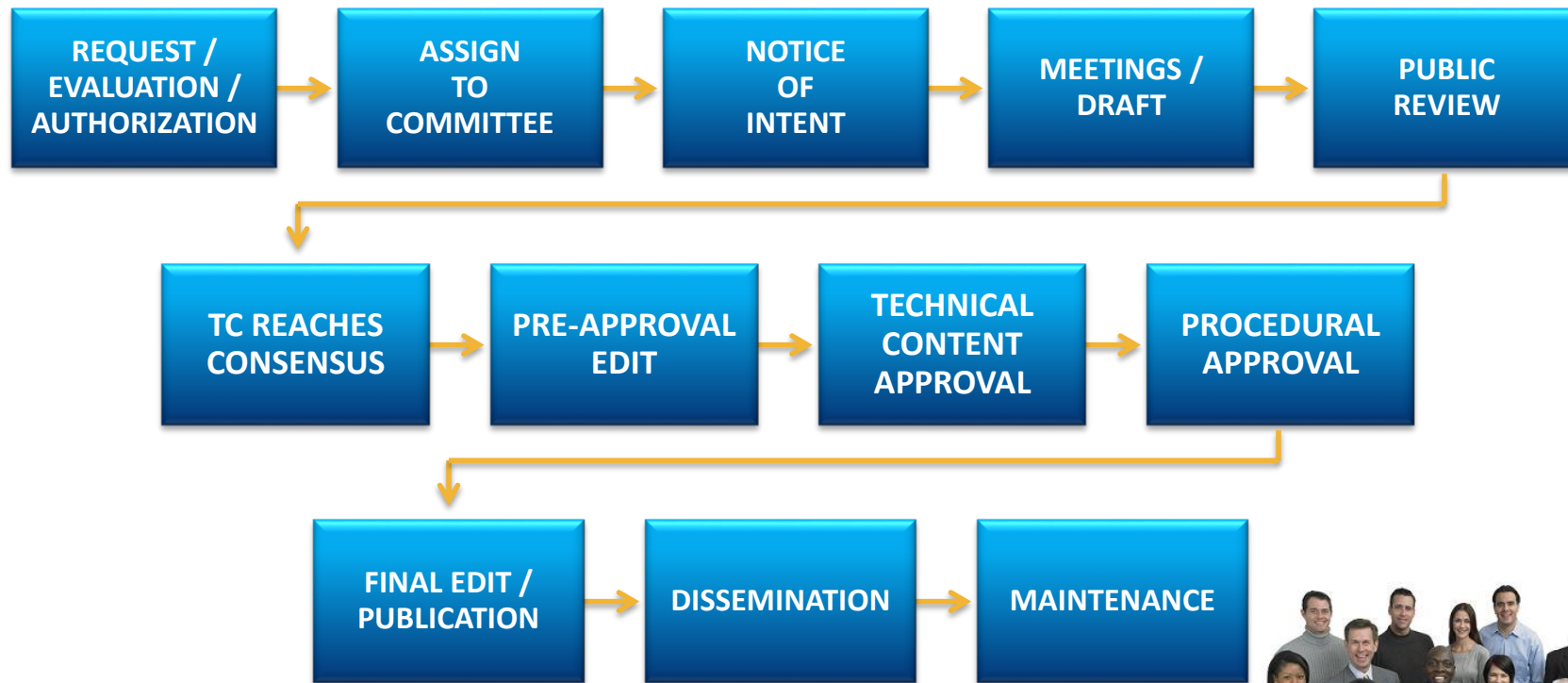


Figure 1
Scope diagram — Reduction of fugitive and vented emissions for
upstream petroleum and natural gas industry systems
(See Clause 1.2.)



Note: Dashed lines indicate all items that are not within the scope of this Standard.

Standards Development Process

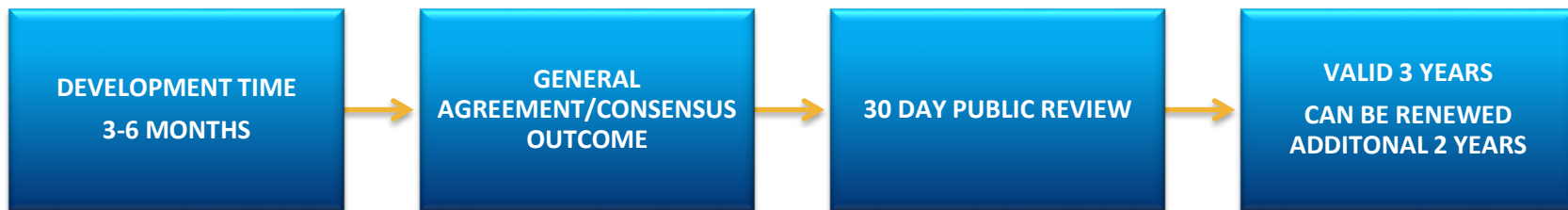


New standard, revise existing / new edition, amendment,
formal interpretations, withdrawals, reaffirmations



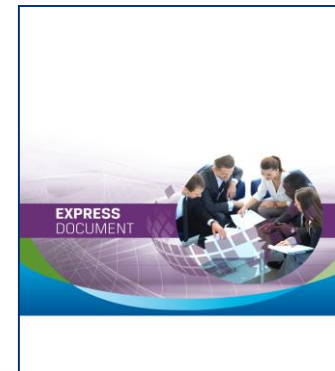
Express Document Process

- An Express Document uses a non-accredited process to quickly introduce a document to fill gaps and to potentially become a standard.
- Express Documents follow an accelerated closely managed process and include a shorter public review period while still leading to an accepted consensus.



Ideal for:

- New/evolving technologies
- Best practices on public policy initiatives
- Global application
- Guidance to support a full standard or regulatory regime
- Trial use or phased approach
- Competency and training applications



Workshop Agreement Process

- A Workshop Agreement is a structured process to bring interested stakeholders together and agree on key guidelines with the end result of developing a published document to help achieve your objectives.



Ideal for:

- Technology roadmap/frameworks
- Agreement on emerging issues
- Industry best practices
- Phased approach that could lead towards a full standard



Private Standard Process

- Private Standards are customized solutions for industry issues, sector challenges, government regulations or organization-specific issues.



Ideal for:

- Developing documentation for private/public sectors and industry organizations
- Draft regulations & regulatory guidance
- Consensus on test protocols & specifications



CSA can assist with the technology commercialization through:

- **Standard Development**
 - **Verification and Certification**
 - **Registries**
 - **Training**



Thank you!

For further information, please contact:



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