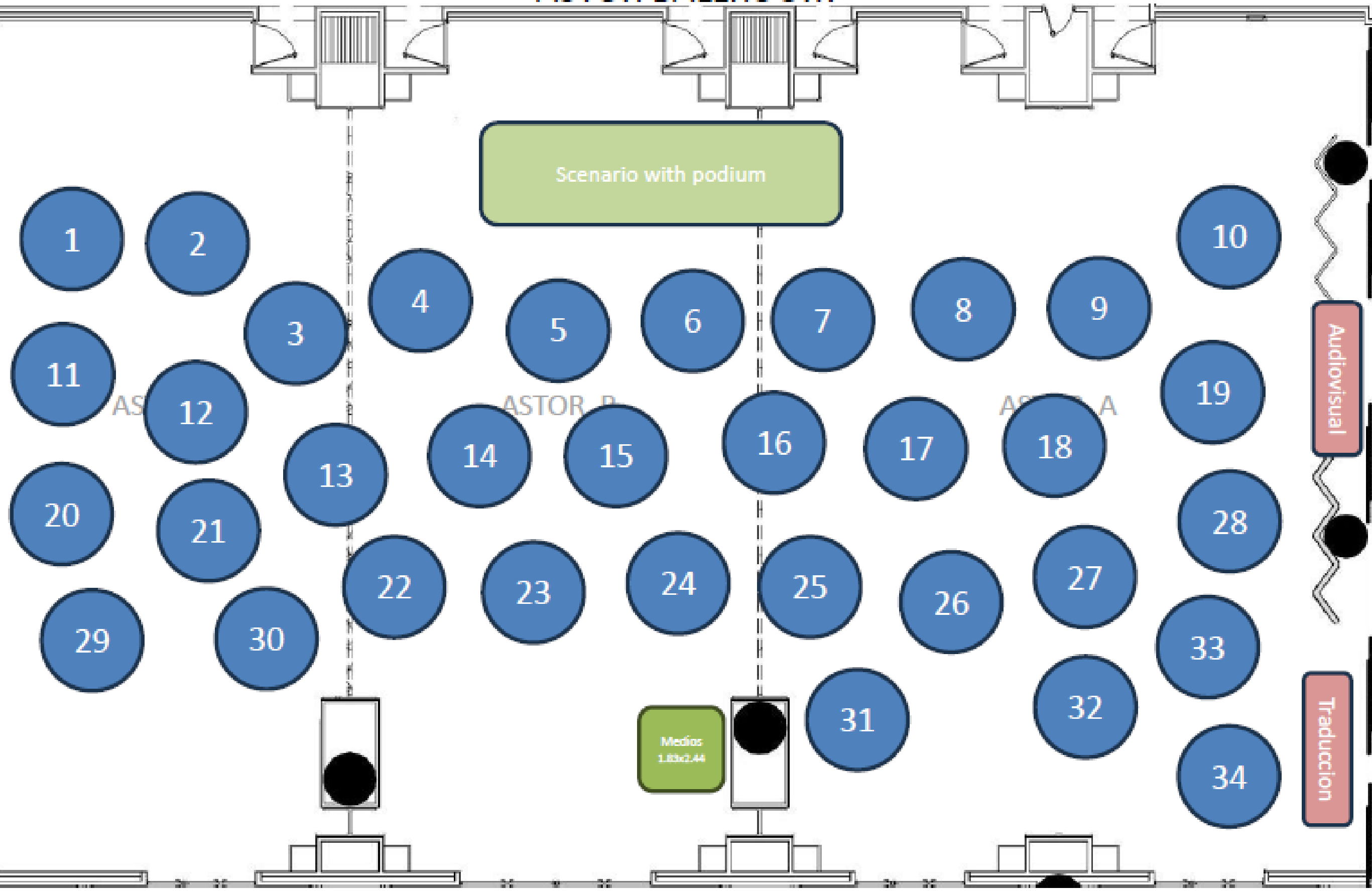


ASTOR BALLROOM



Scenario with podium

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Medios
1.85x2.44

Audiovisual

Traduccion



メキシコ日本商工会議所60周年
繋ぐ、懸け橋として

60° ANIVERSARIO DE LA CÁMARA JAPONESA
DE COMERCIO E INDUSTRIA DE MÉXICO



国家斉唱 メキシコ・日本

Himno nacional
México Japón



來賓紹介

Presentación de invitadas e invitados



メキシコ日本商工会議所
久我会頭挨拶

Presidente
Takaaki Kuga

Cámara Japonesa del Comercio e Industria de México



Juan Ramon de la Fuente 外務大臣 御挨拶

Secretario de Relaciones Exteriores
Juan Ramon de la Fuente
Gobierno de México



鏡開き & 乾杯

Kagami biraki & Brindis



武藤経済産業大臣
ビデオメッセージ

Ministro

Youji Mutou

Economía, Comercio e Industria de Japón
(Mensaje en vídeo)



河田ジェトロ理事御挨拶

Directora Ejecutiva
Mio Kawada

Japan External Trade Organization (JETRO)



外務大臣表彰式

Ceremonia de entrega del Reconocimiento del
Canciller del Japón



在メキシコ日本国大使館
福島大使御挨拶

Embajador del Japón en México
Noriteru Fukushima



岩屋外務大臣祝辞代読

Ministro
Takeshi Iwaya
Asuntos Exteriores de Japón



賞状授与

Entrega de diploma de honor



パネルディスカッション1
在メキシコ商工会議所の役割
-現在と未来-

Panel 1

El rol de las Cámaras de Comercio en México
- Presente y Futuro-



Pedro Casas
American Chamber



Sergio Rubio
Cámara Española de Comercio, A.C.



Andreas Muller
Cámara Mexicano-Alemana de Industria y Comercio

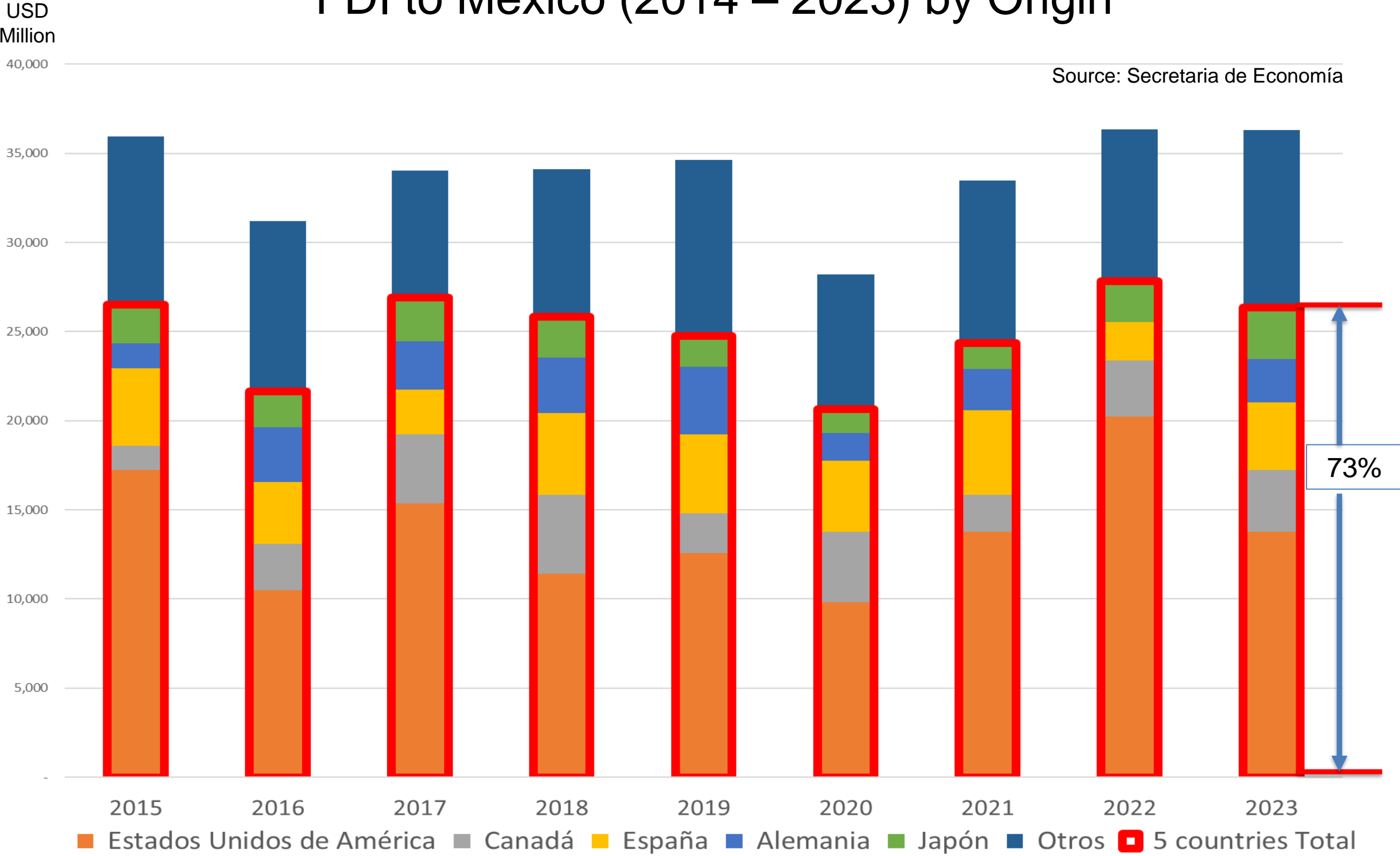


Armando Ortega
Cámara de Comercio del Canadá en México



Takashi Kawano
Camara Japonesa de Comercio e Industria de México

FDI to Mexico (2014 – 2023) by Origin





パネルディスカッション2 ～水素分野における日墨間の連携～

Panel 2

Colaboración Japón-México en el Sector del
Hidrógeno

日本の力を、世界のために。

Supporting Your Global Challenges



The Hydrogen Potentials in Mexico and Japanese Cooperation (Presentation based on Report by ERM)

(Ver. 18th June 2024)

Representative Office in Mexico City
Japan Bank for International Cooperation



Collaboration with the Hydrogen Sub-Commission of the Japanese Chamber of Commerce in Mexico

メキシコ日本商工会議所



Cámara Japonesa de Comercio
e Industria de México, A.C.

1 Super Executive Summary

2 **Advantages for Mexico** to Introduce the Hydrogen Industry

3 **Mexico's Potential** in Hydrogen

4 **The Way to Go for Mexico** towards the Future

5 **Japanese Cooperations** to the Mexican Hydrogen Industry

Appendix

1 Estimated Contributions to Economic Growth by Hydrogen Investments

2 Examples of Projects by Japanese Companies Worldwide

Mexico's Potential in Hydrogen

- We detect several states with huge hydrogenic potential from both supply and demand in terms of clean energy production, high energy demand from heavy industries, proximity to key infrastructure (ports, gas pipe-lines, etc.) and *nearshoring* to the US
- Our study illustrates that Mexico has favourable natural/geographic conditions in the cost competitiveness of green and blue hydrogen compared to other countries
- We estimate significant positive impacts of promoting hydrogen projects in Mexico on the assumption that the ongoing projects are successfully commercialized

Mexico's Potential as Hydrogen Producer/Consumer and also Exporter in the Long-Run

- On the other hand, Japanese companies lead all streams of the hydrogen value-chain with their cutting-edge technology and are backed up by public support from JICA (Japan International Cooperation Agency) and JBIC (Japan Bank for International Cooperation)
- **The Japan Team could be a good partner for Mexico** to explore hydrogen with, as we have global experiences in relevant sectors such as energy, chemical, infrastructure, transportation, etc.

Suggestions for Mexico to Be a Key Player in the Hydrogen

- Our study and interviews to public stakeholders, academia and the private sector indicate the necessity of a series of relevant policy-making at both state and federal levels: **national hydrogen road-map; update of regulations by CRE and SEMARNAT; well-designed and regulated carbon market; sustainable taxonomy; and incentives to investors that offset the price differential between supply and demand at the initial stage in which neither market nor technology is well established**
- The Japanese investors recognize the importance of local contribution, that is, we shall explore hydrogen from which the state or even municipality can benefit in its industry, local economy, decarbonization and energy provision.
- Besides, with the Japanese government's incentives to Japanese hydrogen producers/off-takers/transporters overseas, there will be long-term opportunities to make our local projects grow to the extent that Mexico becomes a hub for Japan to import hydrogen from

global market

Advanced countries
 ✓ US, EU, Australia etc.

✓ Clear policies
 ✓ Incentives

Latin America (ex. Chile and Colombia)
 ✓ hydrogen roadmap established

Mexico

Implement the successful projects to Mexico

Japan

Plan to participate in the projects

(Policy)

- ✓ National Energy Security
- ✓ Economic growth
- ✓ Decarbonization Target
 - International commitment (NDC under Paris Agreement)
 - PRODESEN

(Potentials)

- ✓ Mexico has the potential **both in production and consumption** and in the future, export
- ✓ **Green hydrogen** and also **blue hydrogen**
- ✓ Cost competitiveness

What Mexico needs to do NOW

Preparation to be the next target of investments by:

- ✓ showing its **potentials**
- ✓ Implementing **roadmap, incentives** and regulatory frameworks

Investment or export of equipment

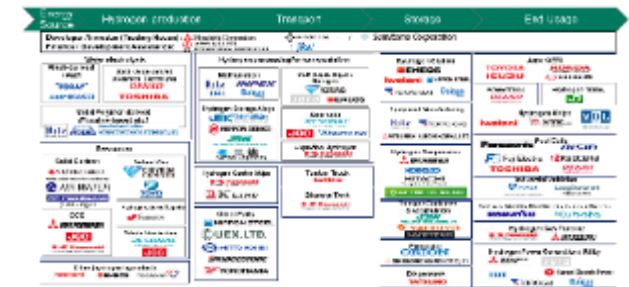
Finance

(Policy)

- ✓ Carbon neutral toward 2050
- ✓ Strategy to import hydrogen from other countries and grow the global market

(Japanese companies)

- ✓ **Technologies and experience from upstream to downstream** in the value chain of hydrogen
- ✓ **Long history of the successful business in Mexico**



(JBIC)

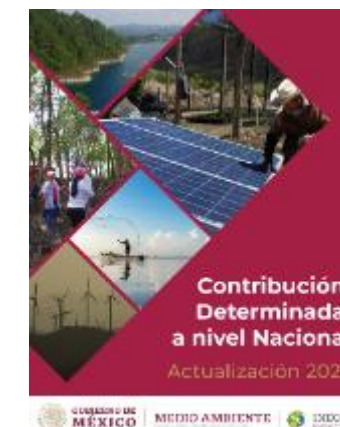
- ✓ Experience in projects of LNG
- ✓ Experience in Mexico
- ✓ Policy dialogue with Mexican Gov.

1. National Energy Security

- ✓ Reduction of the high dependency of gas supply from the United States by using the natural resources in Mexico (especially in the area of gas combined cycle gas generation plants, co-combustion of green hydrogen)
- ✓ Stable energy supply for the regions which are isolated from the National Grid
- ✓ More environmentally friendly use of the existing refineries (grey hydrogen to blue hydrogen)

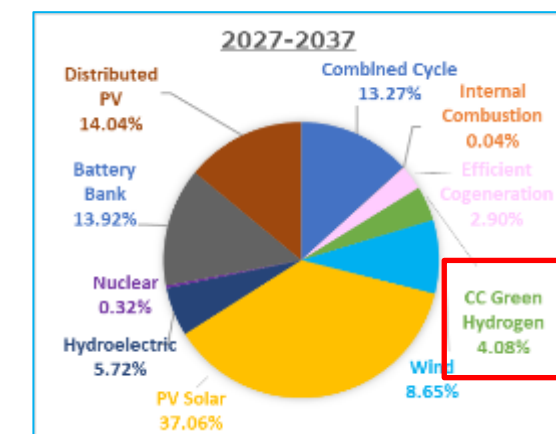
2. Decarbonization Goals and Energy Transition

- ✓ Achievement of the international commitment towards the decarbonization (New target to reduce the GHG emission by 35% compared with BAU basis in its NDC under Paris Agreement in COP27)
- ✓ Accomplishment of national programs and strategies (PRODESEN, Energy Sector Program, Special Climate Change Program etc.)
- ✓ Private companies' target to reduce GHG emission (Scope1, Scope2)



3. Economic Growth

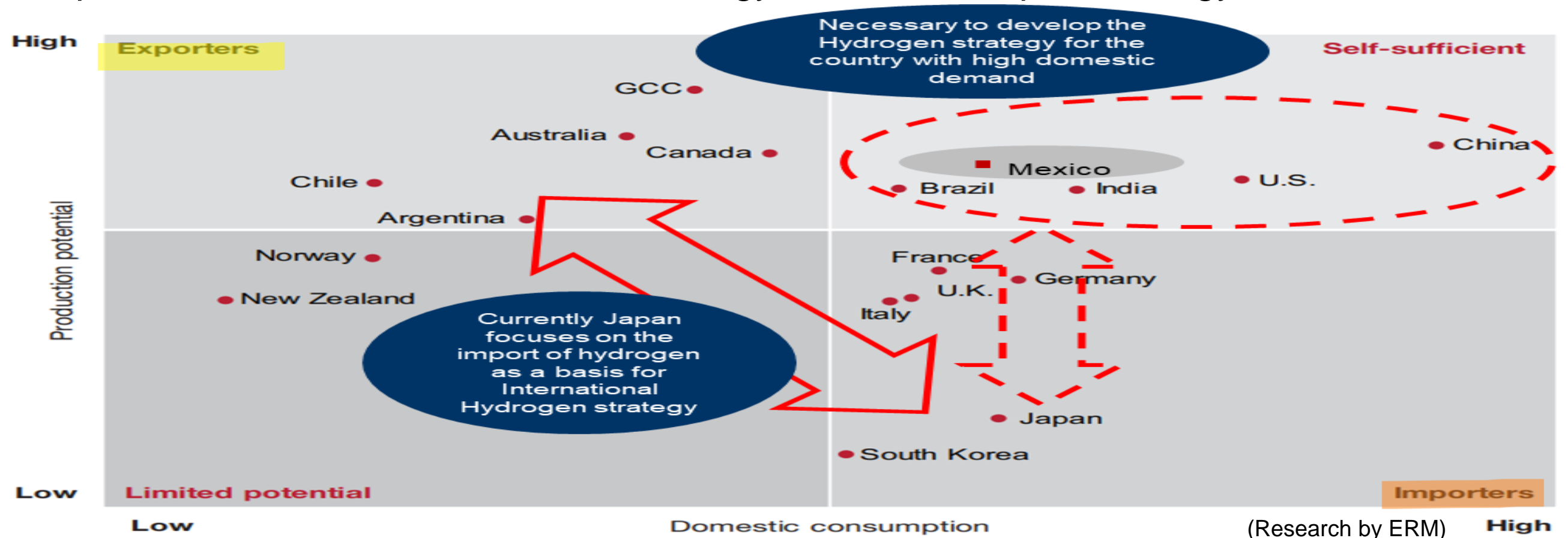
- ✓ Contribution to economic growth and increase of new employment (see appendix 1)
- ✓ Positive impact to Nearshoring by showing the clean energy policies and strategies to private companies



1. Mexico's Potential

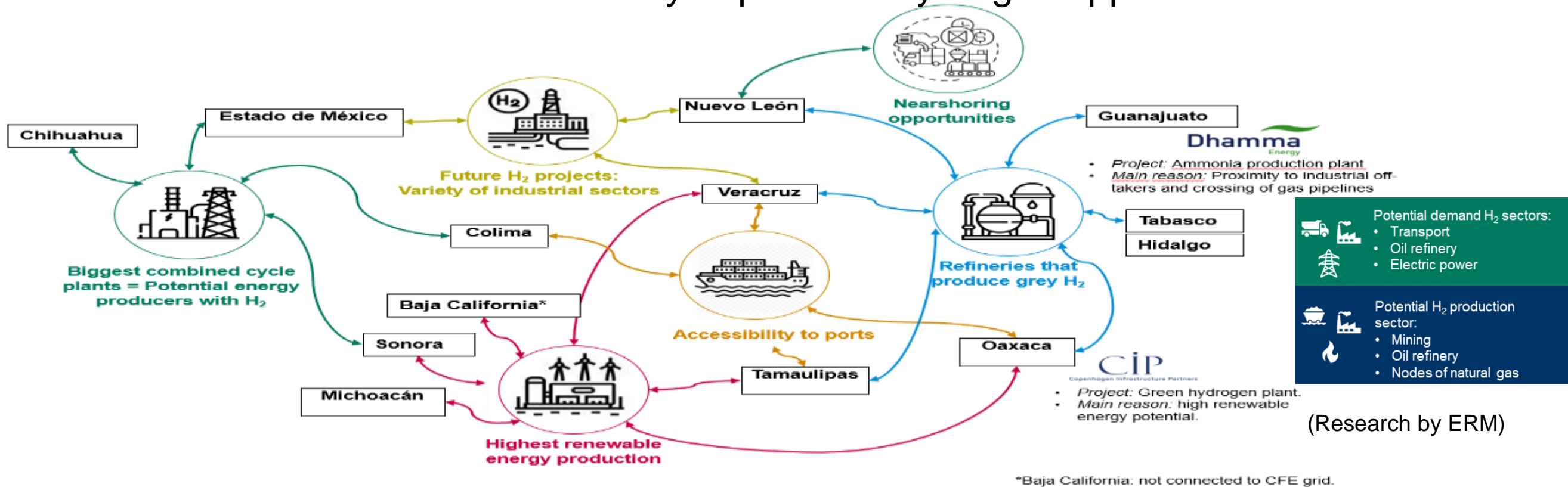
a. From a Global Point of View

- ✓ Mexico is rich in renewable energy resources, bringing **high potential in both domestic production and consumption** and in the future export of hydrogen.
- ✓ For example, Australia and Chile have a high production potential of hydrogen thanks to the existence of renewable energy sources but do not have consumption appetite due to their limited local industries. ⇒ Export strategy
- ✓ On the other hand, Japan and South Korea have a high demand but have a low potential of the limited renewable energy sources. ⇒ Import strategy

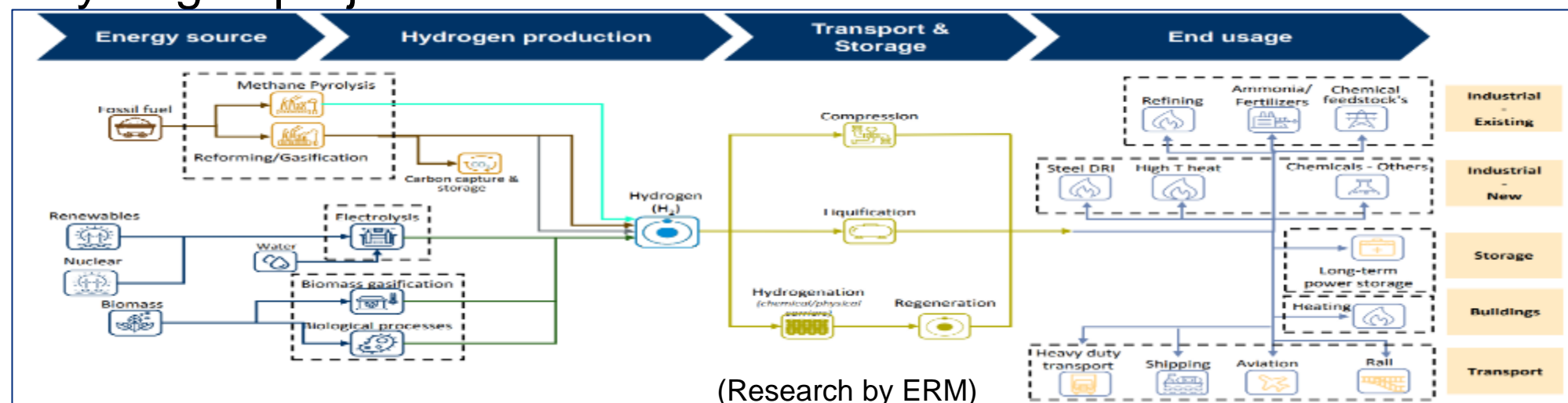


b. From a Domestic Point of View

- ✓ Various states in Mexico have a variety of potential hydrogen applications.



- ✓ Today the hydrogen value chain in Mexico starts mostly from fossil fuels. One possibility is to produce blue hydrogen by using technologies CCS/CCUS. It is also necessary to develop green hydrogen projects from renewable sources.



2. Potential in Domestic Production

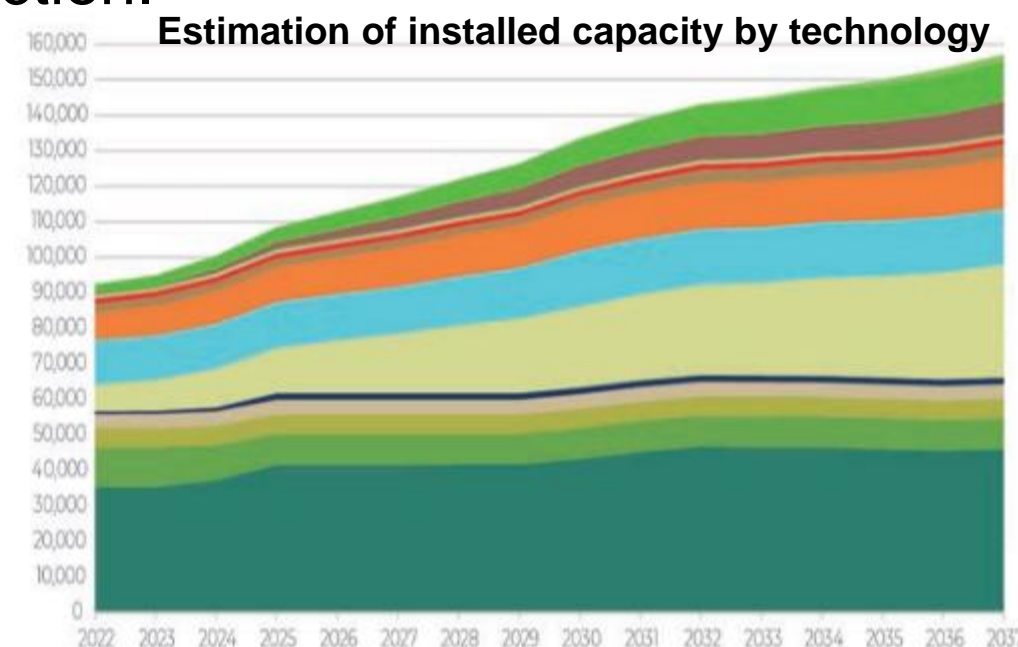
a. Green Hydrogen

- ✓ The actual clean energy generation and estimation of installed capacity imply that there is a potential to implement for the new plants to produce Green Hydrogen.
- ✓ Especially, the states of **Michoacan, Tamaulipas, Veracruz, Baja California** and **Sonora** have high potential of renewable energy production.

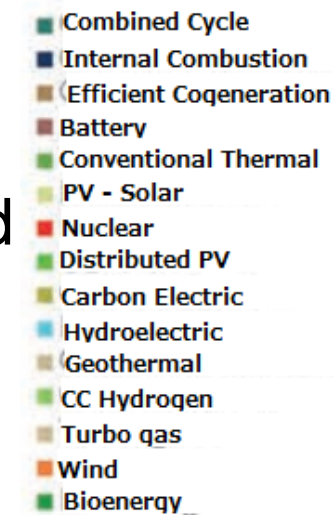
Energy Source	Icon
Solar	
Wind	
Hydroelectric	
Geothermoelectrical	
Nuclear	

State	Energy source	State	Energy source
Aguascalientes	* (1) 200 MW	Nayarit	(2) 1,710 MW
Baja California	(1) 303 MW (1) 700 MW	Nuevo León	(1) 793 MW
Baja California Sur	(1) 10 MW	Oaxaca	(1) 2758 MW
Campeche	(1) 300 MW	Puebla	(1) 220 MW (1) 287 MW
Chiapas	(4) 2,744 MW	San Luis Potosí	(1) 200 MW
Chihuahua	(2) 316 MW	Sonora	(5) 757 MW
Coahuila	(1) 327 MW (1) 397 MW	Tamaulipas	
Guanajuato	(1) 250 MW	Tlaxcala	(1) 220 MW
Guerrero	(1) 600 MW	Veracruz	(1) 1,552 MW
Jalisco	(1) 270 MW	Yucatán	(1) 244 MW
Michoacán	(1) 225 MW (2) 1,566 MW	Zacatecas	(1) 150 MW (1) 230 MW

*(No. of sites)(Research by ERM)



(PRODESEN 2023-2037)



b. Blue Hydrogen

- ✓ There are refineries already producing grey hydrogen which can be converted to blue hydrogen by using the technology of CCS/CCUS.
- ✓ The refineries are located in **Hidalgo, Nuevo Leon, Guanajuato, Oaxaca, Tabasco, Veracruz** and **Tamaulipas**.

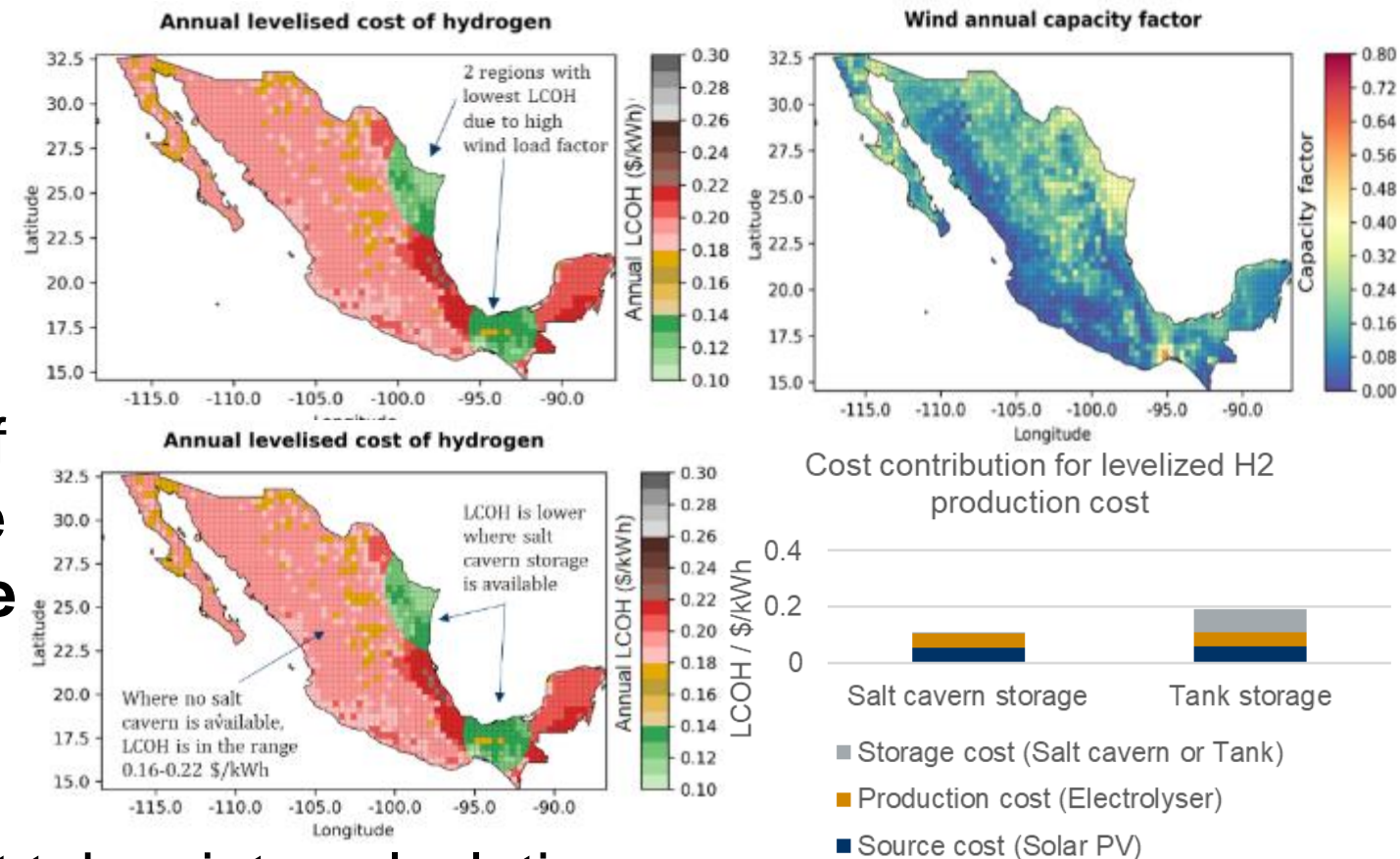
3. Cost competitiveness of production of Hydrogen in Mexico

a. Green Hydrogen

✓ The best achievable levelized cost of hydrogen production (LCOH) in **Mexico (0.09\$/kWh)**, Australia (0.10\$/kWh), the USA (0.11\$/kWh), Colombia/Chile (0.17\$/kWh) and Japan (0.22\$/kWh) if wind/solar power generation takes 50-70% of the renewable generation mix.

✓ Mexico has the cost competitiveness because of the following factors:

- i. Mexico has wind power and solar power with high load factor
- ii. Mexico has salt caverns which significantly contribute to the reduction of storage costs. This enables Mexico to be **more competitive than Colombia/Chile**
- iii. Mexico has competitiveness in labour cost



(Research by ERM)

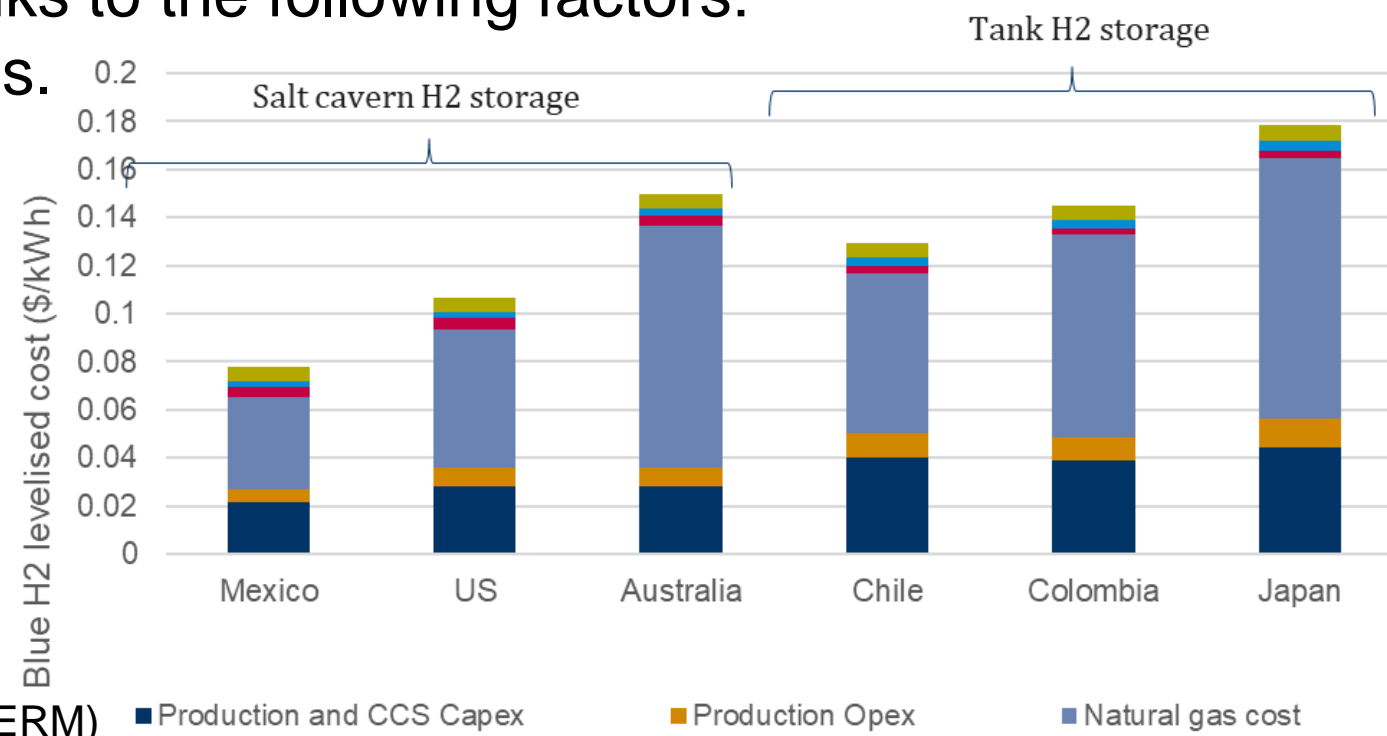
✓ For this analysis, transportation cost is not taken into calculation.

✓ Subsidies are not considered, as some countries have already launched large-scale subsidies to promote domestic production and consumption of hydrogen, such as Inflation Reduction Act in US. **Our interviews to international and Japanese key players suggest that incentives are essential for them to start investments.**

b. Blue Hydrogen

- ✓ The best achievable levelized cost of hydrogen production (LCOH) in **Mexico (0.08\$/kWh)**, the USA (0.11\$/kWh), Australia (0.15\$/kWh), Chile (0.13\$/kWh), Colombia (0.14\$/kWh) and Japan (0.18\$/kWh).
- ✓ In Mexico, the cost is quite similar to that of green hydrogen.
- ✓ Mexico has the cost competitiveness thanks to the following factors:

- i. Mexico has access to cheap natural gas.
- ii. Mexico has salt caverns which significantly contribute the reduction of storage cost
- iii. Mexico has competitiveness in labour cost



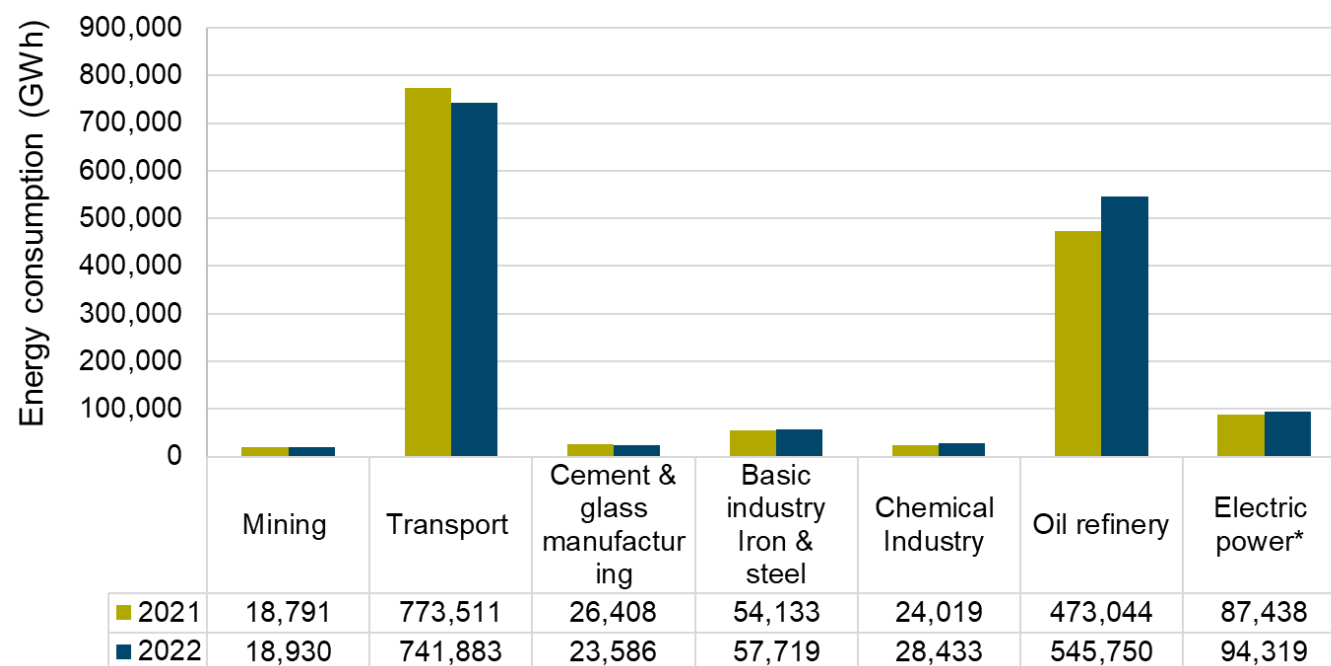
- ✓ In the same way as green hydrogen, neither transportation cost nor subsidies are taken into consideration. **Subsidies are needed to promote investments.**
- ✓ Although Mexico has sites expectedly suitable for CCUS, it might take time to the progression towards readily available CCUS facilities. Also, the earthquake risk should be considered.

4. Potential in Domestic Consumption

a. In general

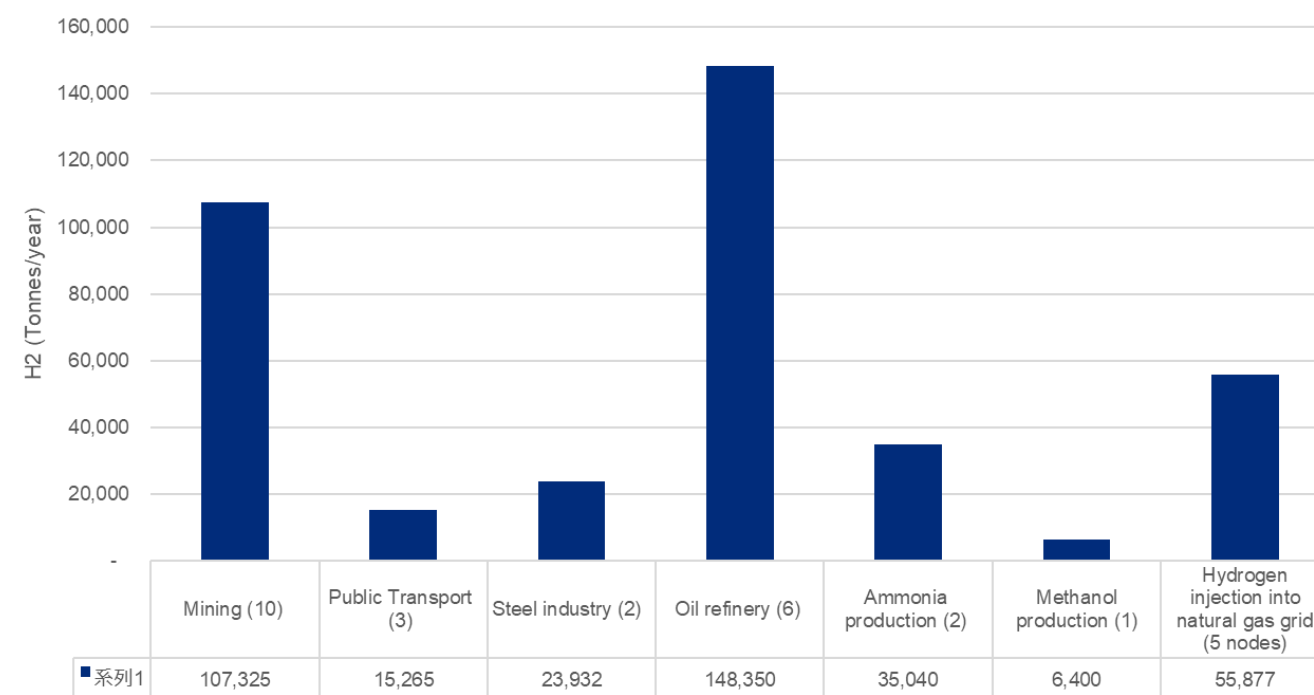
- ✓ There is a significant energy consumption in the **Transport and oil refinery** sectors.
- ✓ Transport sector implies big demands if calculated all the land, air and maritime transport fuel consumption to energy consumption (GWh).
- ✓ Mining sector shows a big demand of hydrogen, if the use of mining machinery working currently with diesel is converted to fuel cells.
- ✓ Refinery sector also shows a significant demand of hydrogen, as the existing refineries are already using hydrogen in their production process. Hydrogen injection to the existing gas pipelines is another potential area.

Energy Consumption



*Residential, commercial & public
(Research by ERM)

*Potential needs of H₂






























(Research by ERM)

*The data in () indicates the number of companies, sites, transport lines or nodes used to calculate the production potential. Information based on the assessment of the greenhouse gas mitigation potential of green hydrogen. Mario Molina Center.¹²

b. In Which States? In Which Sector?

- ✓ There are various industries in Mexico with growing possibility to consume hydrogen in the future.
- ✓ Especially, **Estado de Mexico**, **Nuevo Leon** and **Veracruz** have a variety of industries to be large markets of hydrogen.









Sector	Icon	State	Sectors	Volume	Revenue
Oil Refinery		Aguascalientes		N/A	Cement: \$6,725M MXN
Mining***		Baja California	 	N/A	Cement: \$8,707M MXN
Cement		Chihuahua	  	Mining: 154,703 Ton*	Cement: \$5,930M MXN
Iron and steel		Coahuila		Mining: 218,011 Ton*	N/A
Ammonia		Colima	 	Mining: 637,433 Ton*	N/A
Methanol		Durango	 	Mining: 250,539 Ton*	N/A
Glass manufacturing		Guanajuato		Oil refinery: 116,000 barrels/day	N/A
Power Generation		Hidalgo	 	Oil refinery: 315,000 barrels/day	Cement: \$17,280M MXN
		Estado de México	   	Mining: 22,651 Ton*	Glass (\$19,361M MXN/ Cement (\$9,598M MXN),
		Michoacán		Mining: 342,854 Ton*	N/A











(Research by ERM)

*Until June 2023
N/A: data no available

**Note: the economic impact of the mines where large volumes of production are observed is unknown. Since such revenues depend on the type of mining, large volumes do not imply large revenues.

b. In Which States? In Which Sector? (continued)

Sector	Icon
Oil Refinery	
Mining***	
Cement	
Iron and steel	
Ammonia	
Methanol	
Glass manufacturing	
Power Generation	

State	Sectors	Volume	Revenue
Nuevo León**		Oil refinery: 275,000 barrels/day	Cement: \$5,830M MXN Iron & steel: \$20,976 M MXN Glass: \$17,634M MXN
Oaxaca		Oil refinery: 315,000 barrels/day Mining: 33,731 Ton*	N/A
Puebla		Methanol (H ₂ demand): 6,400 Ton/year	Cement: \$11,520M MX
San Luis Potosí		Mining: 96,748 Ton*	Cement: \$9,186M MX
Sinaloa		Ammonia: 2,200 MT/day	N/A
Sonora		Mining: 94,763 Ton*	N/A
Tabasco		Oil refinery: 340,000 barrels/day	N/A
Tamaulipas		Oil refinery: 106,000 barrels/day	N/A
Veracruz		Ammonia: 823 Ton/day Oil refinery: 285,000 barrels/day	Iron & steel: \$45,439M MXN Cement: \$8,213M MXN
Zacatecas		170,134 Ton*	N/A

(Research by ERM)

*Until June 2023

N/A: data no available

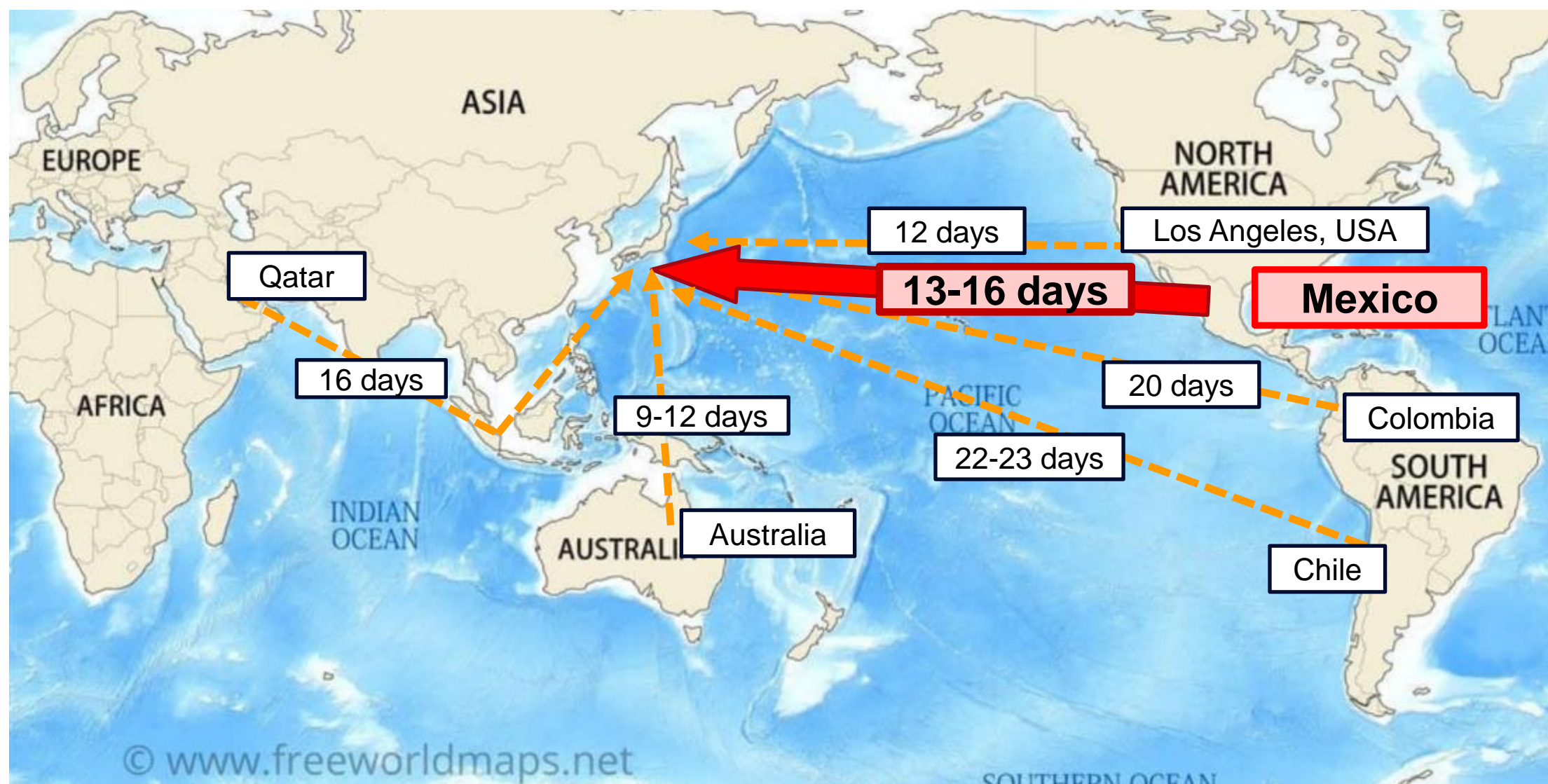
**Based on the comments of the Renewable Energy Agency of Nuevo Leon, the state has an estimated of green hydrogen consumption potential of 295 kTons.

***Note: the economic impact of the mines where large volumes of production are observed is unknown. Since such revenues depend on the type of mining, large volumes do not imply large revenues.

Mitsubishi Heavy Industry exports gas combined cycle turbines which are technologically ready for co-combustion of hydrogen to CFE and financed by JBIC in March 2024.

4. The Potentials of Export in the future

- ✓ To transport hydrogen from Mexico to Japan, it will take between 13 days (from Costa Azul port) and 16 days (from Salina Cruz port).
- ✓ Mexico has a comparable competitiveness in time distance from Japan, which could lead Mexico to be a next hydrogen exporter for Japan in the future.
- ✓ To achieve that, it is necessary to improve transport infrastructure such as pipelines, ports and liquefaction facilities.



1. Summary of Our Conducted Interviews to Different Stakeholders

- ✓ Now most companies are trying to participate in the projects in those countries which have clear policies and incentives regarding the hydrogen development.
- ✓ With its high potentials, **Mexico can be one of those countries**. What Mexico needs to do now is to **prepare itself to be a next target by elaborating its own roadmap, incentives and regulatory frameworks** for the global investors.

Interviews Outcome

- Most companies are drawing strategies and market deployment in US, Europe, Australia etc. which have clear hydrogen policies and incentives. **Mexico is expected to be an emerging market in the next phase.**
- Focus on the hydrogen business to promote the use of hydrogen in domestic market as well as import
- As the market and technology are not yet established, government policy support is essential. Especially, **hydrogen roadmap, regulatory framework, incentives are fundamental to anticipate investment.**

What Mexico needs to do NOW

- Making a **Hydrogen Roadmap** and discuss plans to develop necessary technologies, infrastructure and cultivate companies and industries of hydrogen supply chain.
- Implementing **incentives such as subsidies and tax deduction** to reduce investment risks and ensure profitability
- **Establishing regulatory frameworks and standards** to adapt the decarbonization society and carbon intensity
- Formulating industrial policies to incorporate hydrogen into national industrial and energy policies focusing on regional industrial clusters and people's social lives

2. The Possible Hydrogen Policy Steps in Mexico

- ✓ The following is a possible way to develop the hydrogen policies in Mexico.

Hydrogen Development Strategy ※

Short Term

1-2 years

- ✓ Establishment of guidelines for evaluation and approval process for hydrogen projects
- ✓ Collaboration with potential stakeholders such as educational missions, knowledge transfer, access to the latest innovations

(※ note)

- This timeline is based in the fact that the federal executive and congress will be renewed in 2024 as well as changes at the state level in the legislative branch and, in some cases, the executive.
- It is important to mention that the established deadlines are subject to possible changes depending on the political circumstances that the Mexico may confront.

Short to Medium Term

1-3 years

- ✓ **Development of National Hydrogen Strategy and establishment of Hydrogen Roadmap**
- ✓ Establishment or upgrading of regulations by CRE and SEMARNAT
- ✓ Start-up of the regulated carbon market
- ✓ Development of sustainable taxonomy
- ✓ Amendment to the Transition Strategy to promote the use of hydrogen
- ✓ Incorporation of hydrogen to climate change programs

Medium to Long Term

2-3+ years

- ✓ **Establishment of Tax Incentives for Hydrogen**
- ✓ Establishment of specific law on hydrogen or modifications of existing laws including regulations for synthetic fuels and blue hydrogen
- ✓ Adoption of carbon taxes in federal level
- ✓ Financial assistance and establishment of funds to accelerate hydrogen investments

(Research by ERM)

3. Proposed Contents of Hydrogen Roadmap for Mexico

- ✓ The following is possible Hydrogen Roadmap contents for Mexico.
- ✓ Mexico can consider the roadmap through the discussion with Japan.

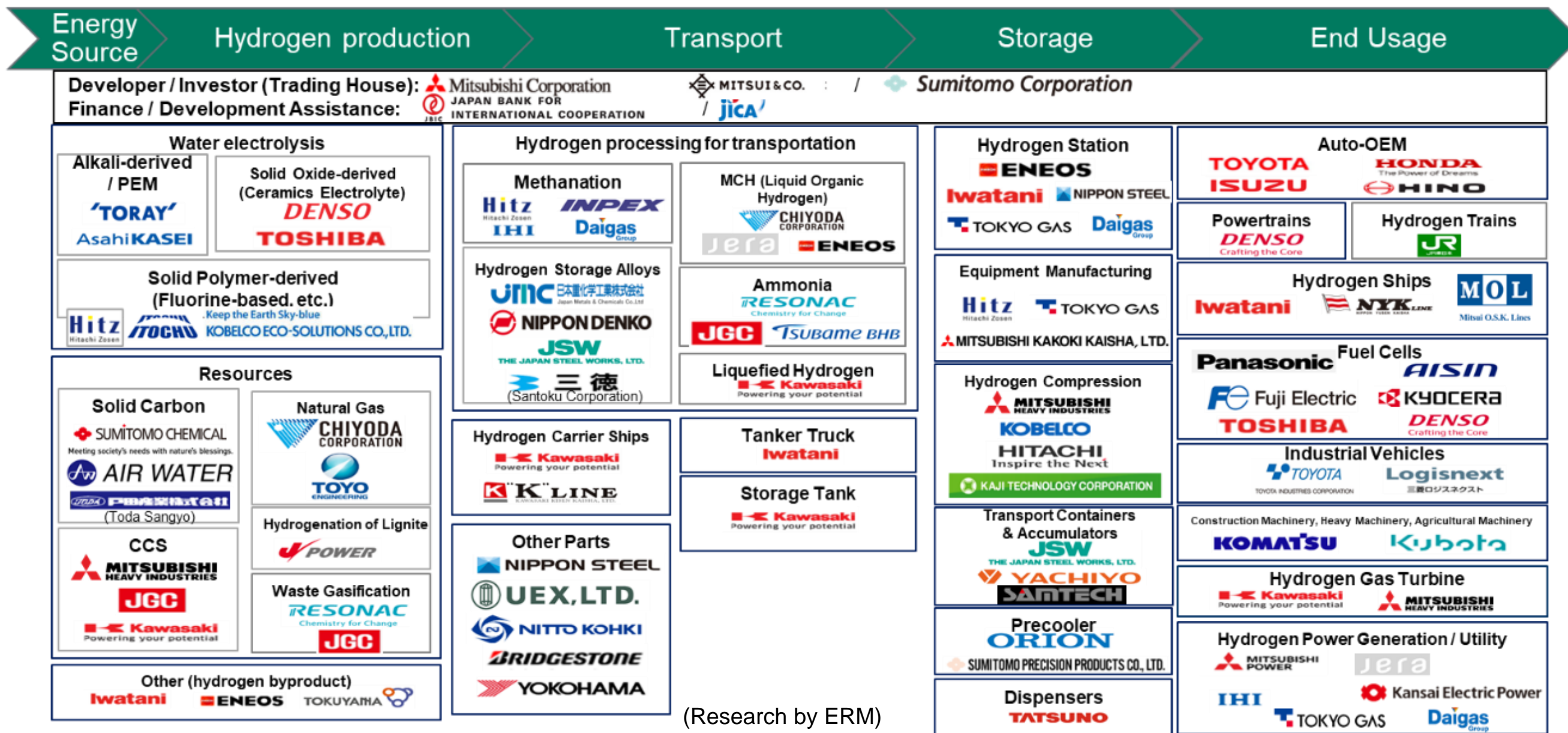


Aspects	Description
Background/ country context	<ul style="list-style-type: none"> ✓ General information on the hydrogen trend at global and national level ✓ Potential sectors to utilize hydrogen ✓ Strength of the country (resources, renewable energies, infrastructure and business ecosystem) ✓ Political and regulatory context ✓ Challenges to overcome
Hydrogen production at national level	<ul style="list-style-type: none"> ✓ Types of hydrogen, costs and potential use in different sectors and regions ✓ Evolution of the national hydrogen competitiveness and steps ✓ Domestic demand and export
Goals: phases to achieve	<ul style="list-style-type: none"> ✓ Concrete targets of production and consumption of hydrogen, costs, decarbonization etc. and next steps and timeline
New legislative and regulatory proposals	<ul style="list-style-type: none"> ✓ Review of the current national regulations, permits and procedures and incorporate the new ones to implement hydrogen projects ✓ System of guarantees of origin and certifications for hydrogen ✓ Incentives: creation of tax incentives / financial facility instrument to support
Other pillars or guiding principles	<ul style="list-style-type: none"> ✓ Local communities, balanced use of resources and territory, diversity, equity inclusion, accessibility, quality jobs etc.

1. Why Cooperate with Japan?

a. From a **Technological** Point of View

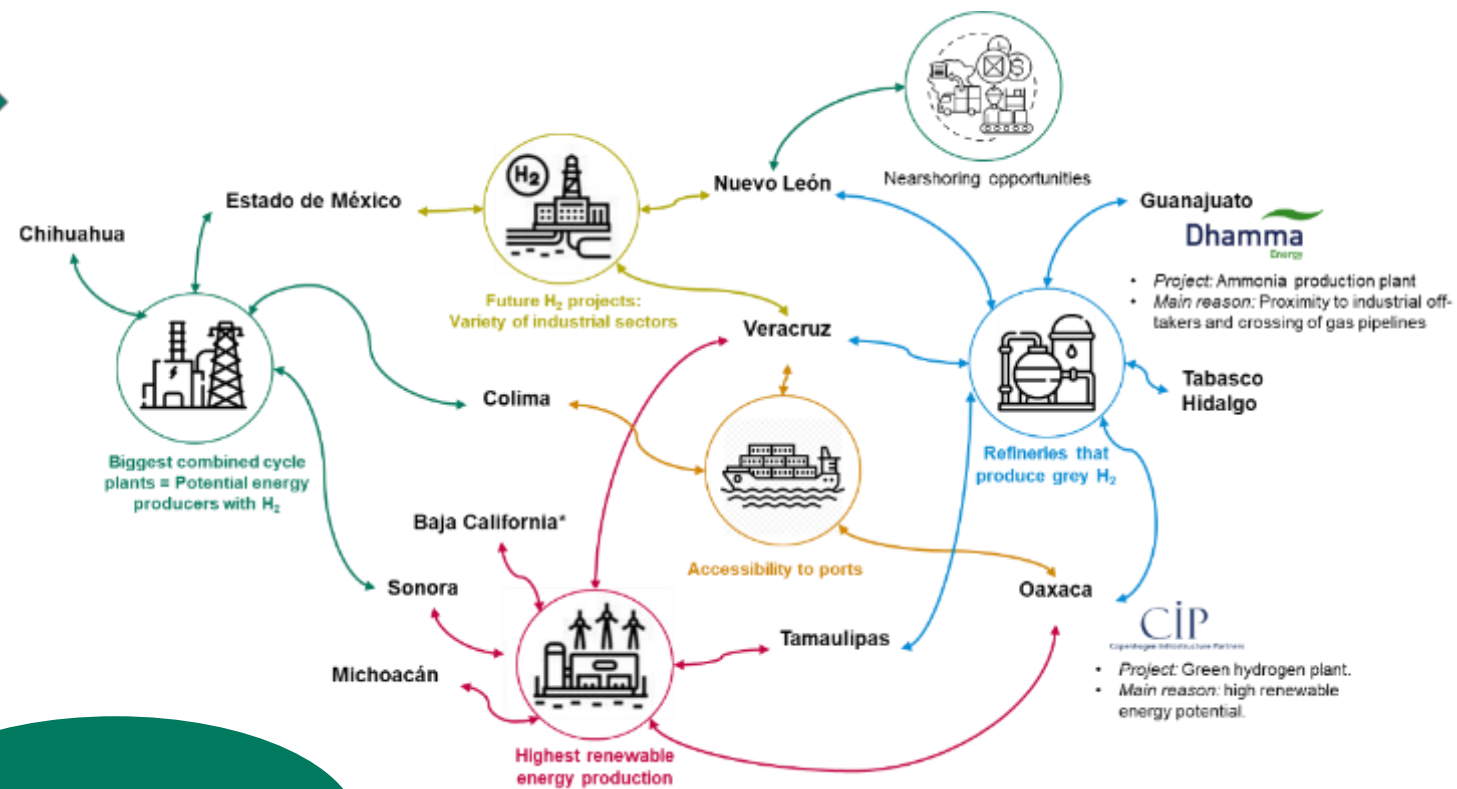
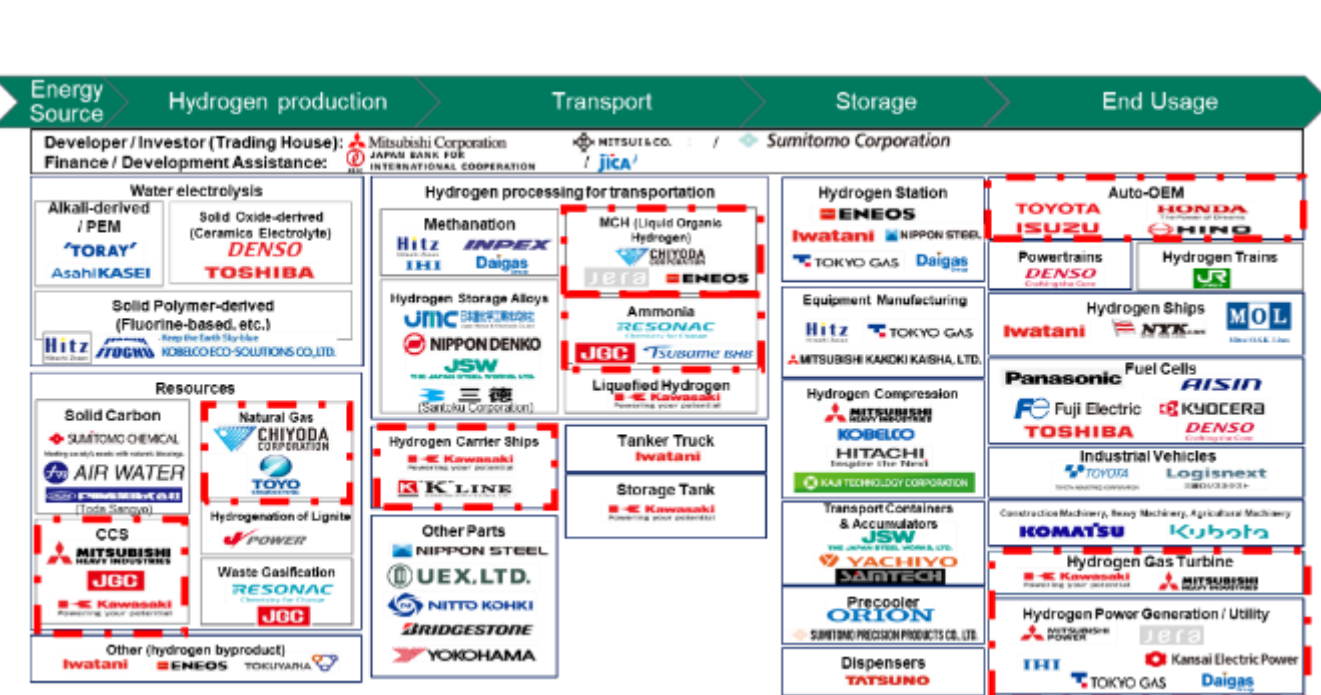
- ✓ Japanese companies covers a **wide range of the hydrogen value-chain** not only related to fossil fuels but also infrastructure including Transport & Storage, as well as in End Usage industries.



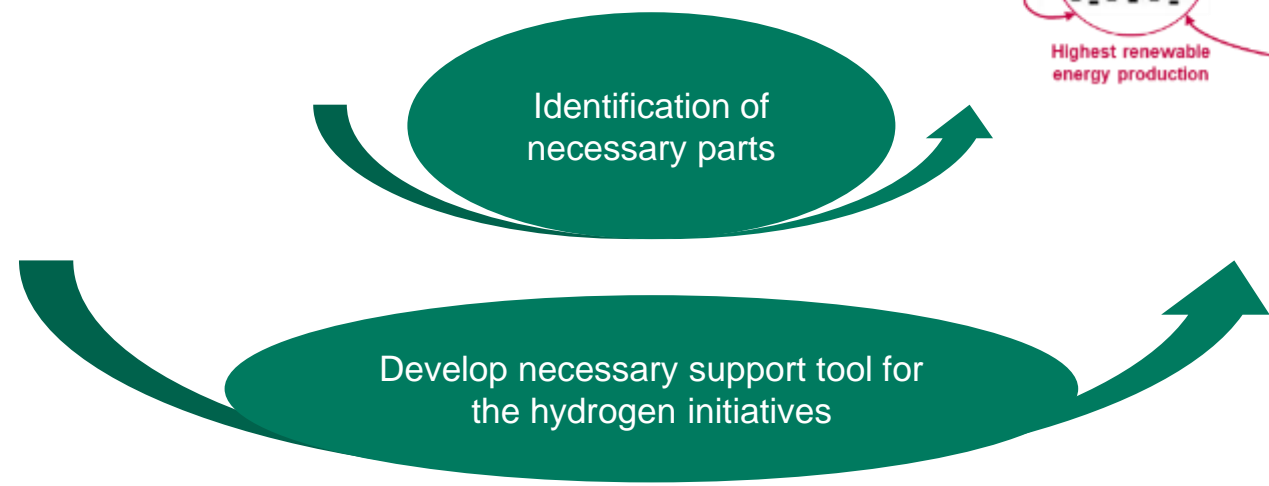
(Research by ERM)

a. From a **Technological** Point of View (continued)

- ✓ Japanese companies can participate in the necessary parts of Mexican hydrogen value-chain in individual states that have a potential hydrogen application.
- ✓ JBIC can consider its financial support to such projects as involve Japanese companies.



Mexico is projected to have both supply and demand for hydrogen. Japanese corporations need to identify which technology will fit the initial development of the Japanese hydrogen business in Mexican market.



In the process for approaching individual states, it is necessary to structure the argument on “what would be the benefit for the States/local community”.

(Research by ERM) Baja California: not connected to CFE grid.

b. From a **Political** Point of View

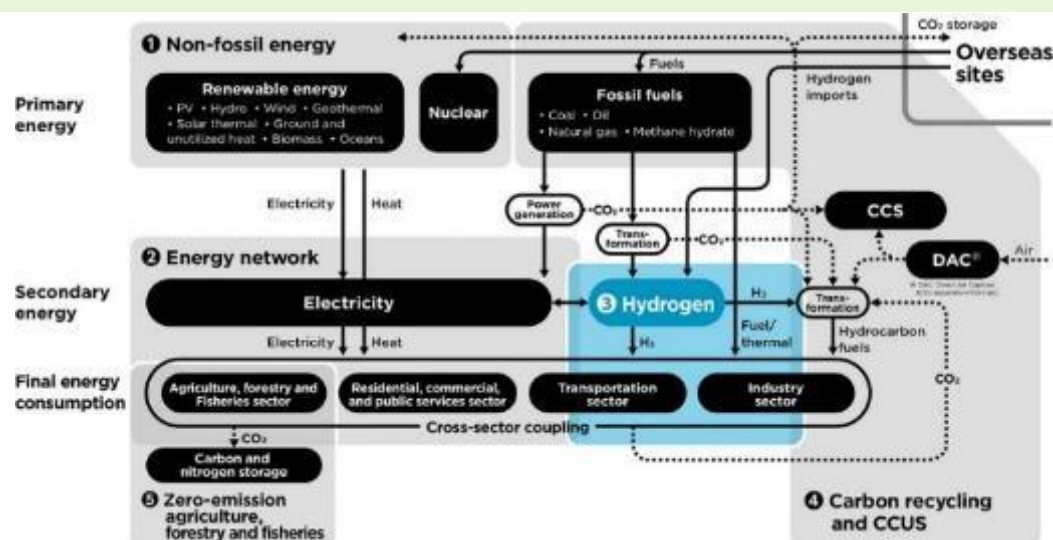
- ✓ Japanese government policy used to be based on the import of hydrogen from the other countries.
- ✓ However, the new strategy focuses on **the implementations of Japanese hydrogen technologies** in the domestic market as well in order to develop the hydrogen industries globally.

Japanese Hydrogen Policy

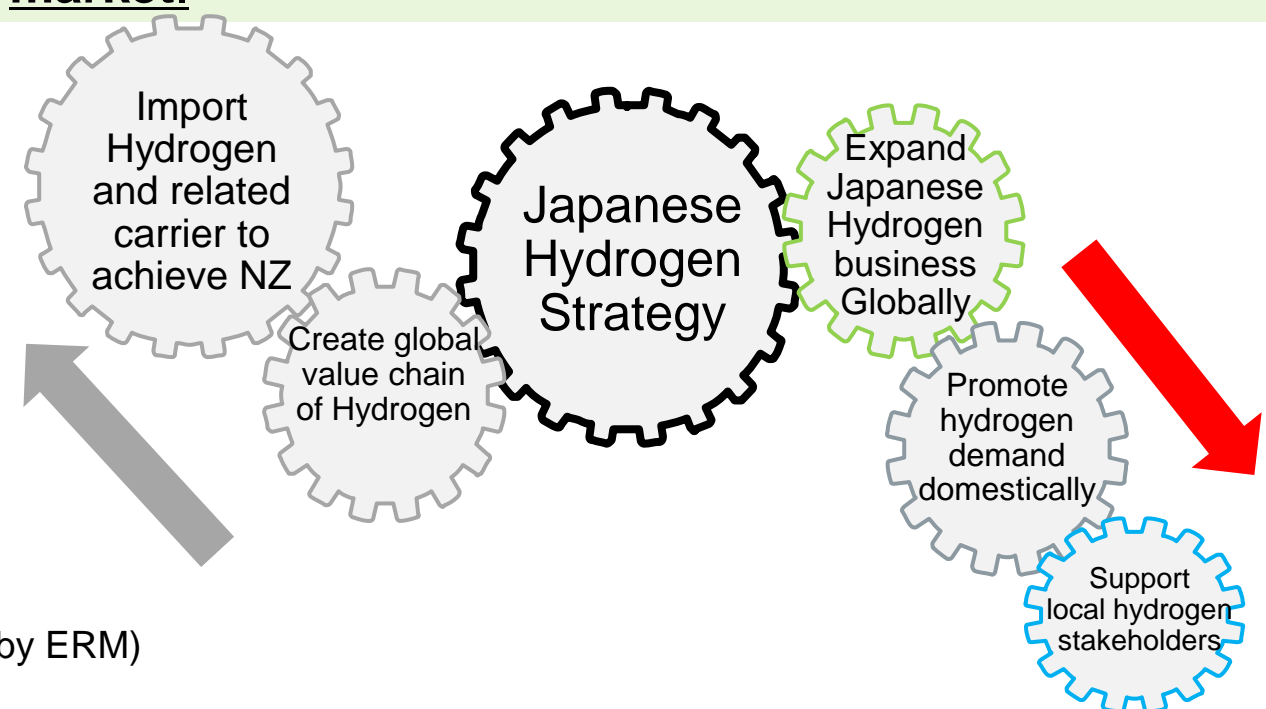
- Japanese hydrogen road map focuses on the import of hydrogen and wider carrier applications
- Strong competition among the countries that are willing to export hydrogen toward the big demand in Japan.
- Although Mexico has a big potential to be an exported of hydrogen, the hurdles to be a front runner in the global wide competition shall be high.

New direction of the Japanese Hydrogen Policy

- New Hydrogen strategy of Japan focuses not only on the import but also on **the implementation of Japanese hydrogen technologies in the global market.**
- Thus, Japanese business shall have wider business opportunities in **developing Japanese hydrogen business in Mexico to fulfill future needs in domestic market.**



(Research by ERM)



c. From a **Historical** Point of View

- ✓ Mexico and Japan have a history of reliable partners!
- ✓ Japan can leverage the past business experience in Mexico.

Private Sector

- ✓ Japan has a long history in the successful business development in Mexico and now there are nearly 1,300 Japanese companies based in this country.
- ✓ There are Japanese companies which have experience and knowledge in energy sector.

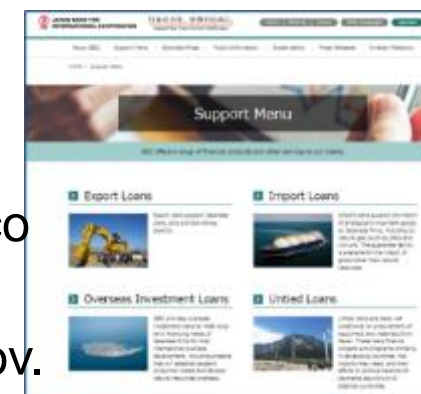
Public Sector

Japanese Embassy/Japanese government

- ✓ Taking a lead to realize a green society by hosting Hydrogen Energy Ministerial Meeting.
- ✓ Accelerating dialogue with the federal and state governments, in collaboration with all Japanese stakeholders.

JBIC JBIC

- ✓ Finance to the projects in which Japanese companies participate
- ✓ Experiences in energy sector in Mexico and in the world
- ✓ Direct policy dialogue with Mexican gov.



JETRO Japan External Trade Organization

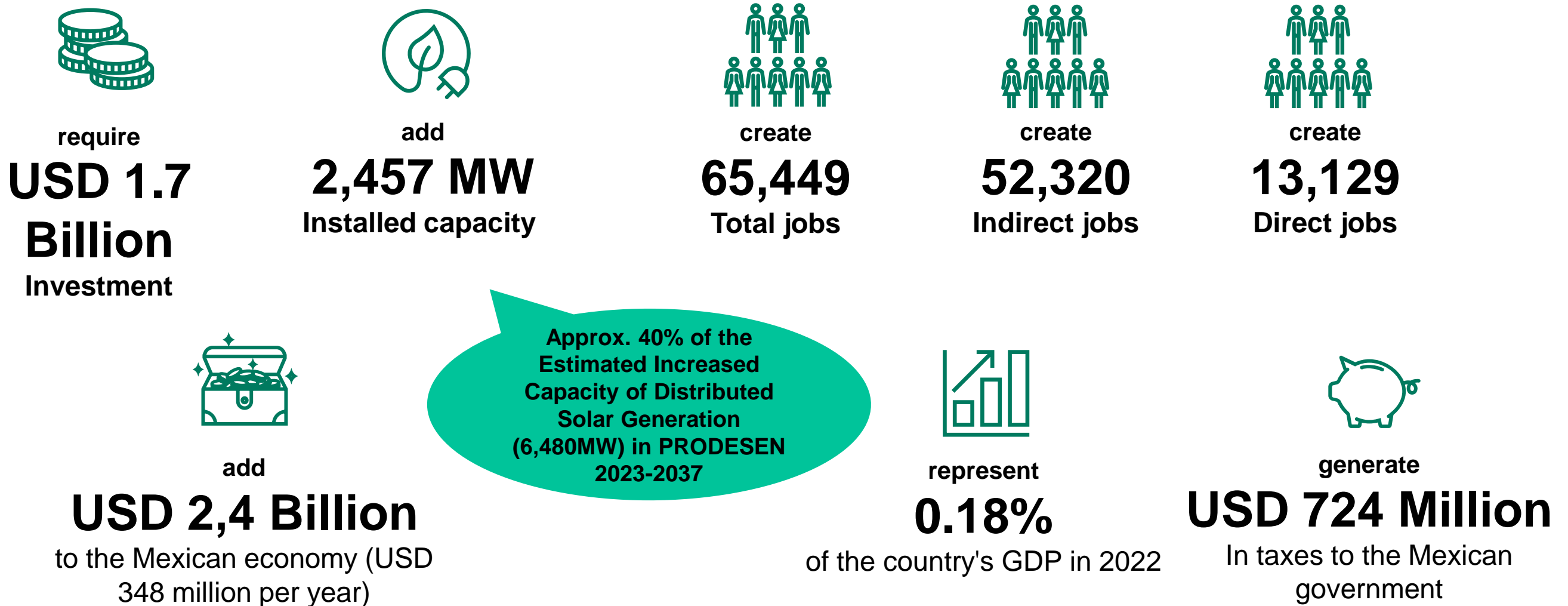
- ✓ Experiences in creating business opportunities by supporting BtoB collaboration
- ✓ Wide and strong network all over the world with its 77 offices in 55 countries

JICA

- ✓ Finance to projects in which Mexican companies (in collaboration with Japanese companies as minority investor, if possible) participate
- ✓ Training courses in Japan and other countries in the region about the use and promotion of hydrogen

Appendix 1 Estimated Contributions to Economic Growth by Hydrogen Investments

✓ The implementation by 2030 of the hydrogen production projects identified by ERM (ongoing and planned) will ...



(Research by ERM)

Yuri Renewable Hydrogen Project (Western Australia)

- ❑ This project will be a first of a kind industrial-scale deployment in Australia to generate renewable hydrogen for producing renewable ammonia with off-grid intermittent renewable power via electrolysis
- ❑ Engie and Mitsui's JV (Yuri SPV) will develop the project and own the facility, and Yara will offtake 100% of the output.
- ❑ The project will obtain funding support from the Australian Government through ARENA's Renewable Hydrogen Deployment Funding Round* and WA state government.

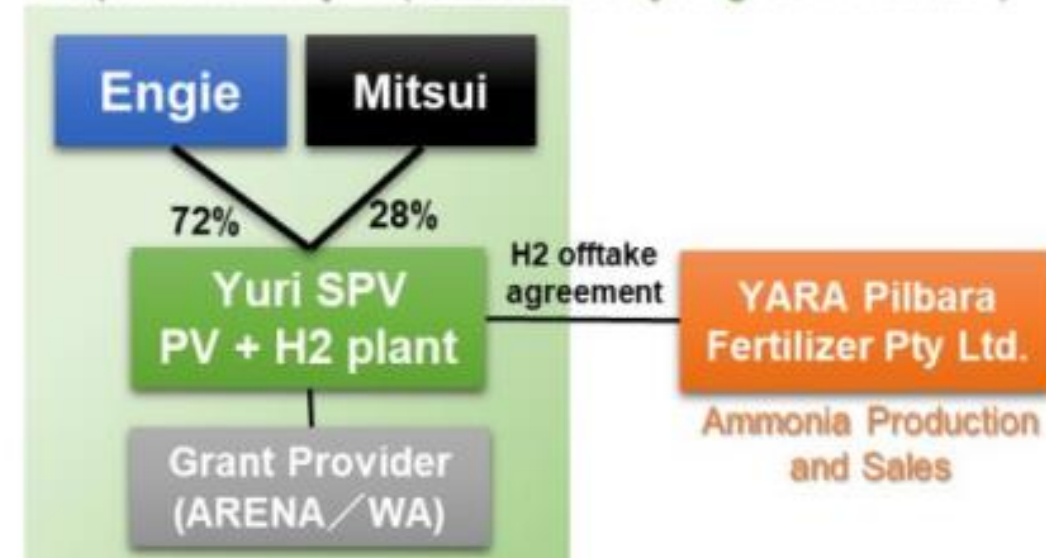
*ARENA = Australian Renewable Energy Agency



Image of Renewable Hydrogen Production Plant next to Yara's ammonia producing plant in Karratha

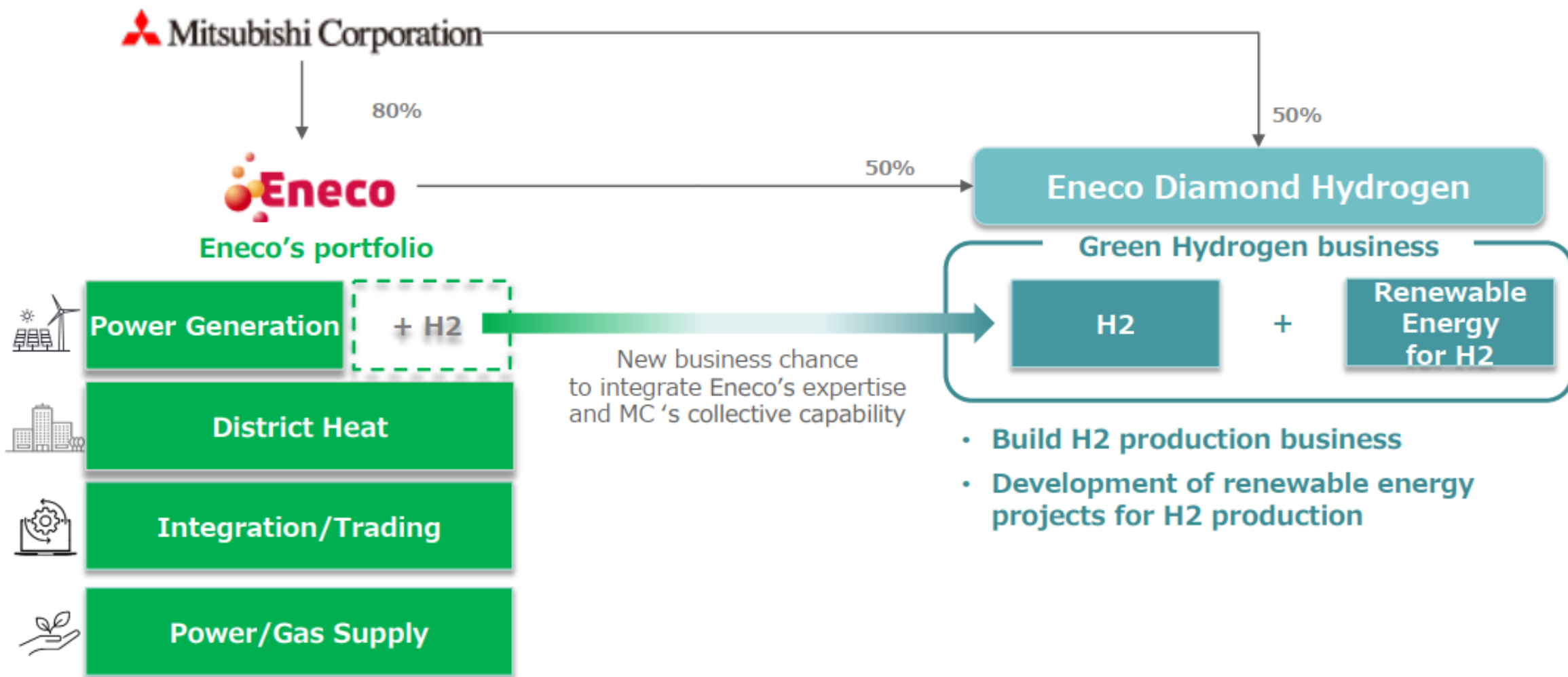
Project Investors	Engie 72% : Mitsui 28% (Yuri SPV)
Location	Karratha, Pilbara region, WA
RE Capacity	18MW Solar (Capacity base)
Electrolyser	10MW (Capacity base)
Battery capacity	8MW / 5MWh (Capacity base)
Hydrogen Volume	Up to 640 ton-H2 per year
Offtaker	Yara Pilbara Fertiliser Pty. Ltd. (100% owned by Yara International ASA)
Schedule	Construction Start : Dec 2022 COD : 2024

Scope of the Project (Renewable Hydrogen Production)



Eneco Diamond Hydrogen (EDH)

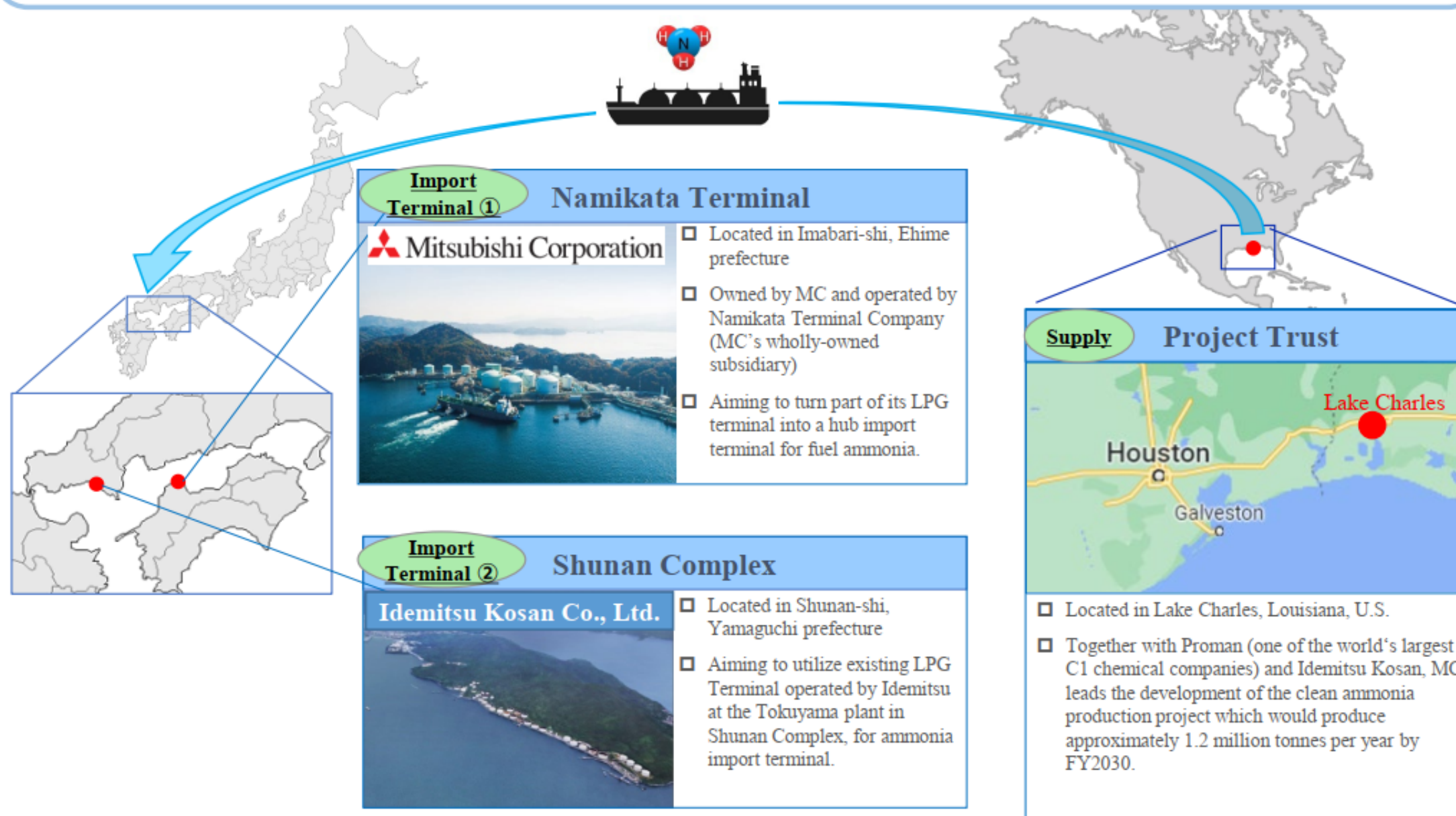
- Eneco Diamond Hydrogen (EDH) is a joint venture between Mitsubishi Corporation (MC) and its subsidiary N.V. Eneco (Eneco), an integrated energy company that is also headquartered in Rotterdam.
- EDH is a platform for developing a green hydrogen business for local production and consumption in Europe in line with the MC's EX strategy.
- It will utilize Eneco's long-standing knowledge and experience in renewable energy development and MC's extensive relationships in the oil, chemical, steel, shipping and other industries.



Clean Ammonia Supply Chain Development

Mitsubishi Corporation

- Toward FY2030, Mitsubishi Corporation (MC) is aiming to develop a U.S./Japan clean ammonia supply chain.
- Project Trust, a clean ammonia production project in Lake Charles, Louisiana, U.S., is being developed by MC, Proman and Idemitsu.
- Namikata Terminal and Shunan Complex to be converted to clean ammonia distribution hubs, providing stable supply of low-carbon fuel and contributing to decarbonization of Setouchi/Western Japanese regions.



Decarbonization Technology

November 30, 2023 – Mitsubishi Power Successfully Operates an Advanced Class Gas Turbine with 30% Hydrogen Fuel Co-Firing at Grid-Connected T-Point 2

PRESS INFORMATION

Mitsubishi Power Successfully Operates an Advanced Class Gas Turbine with 30% Hydrogen Fuel Co-Firing at Grid-Connected T-Point 2

2023-11-30

[G](#) | [f](#) | [X](#) | [in](#)

- Successfully executed hydrogen fuel blending from partial load to full load in a state-of-the-art 1,650°C class M501JAC gas turbine
- Verified low NOx and stable combustion using a “Dry Low NOx (DLN) combustor” with 30% hydrogen fuel mixed with natural gas
- Utilized Takasago Hydrogen Park to perform integrated co-firing from hydrogen production to utilization in power generation application



Hydrogen Production/Storage Facilities and T-Point 2 in Takasago Hydrogen Park

[PRESS INFORMATION]

- Successfully executed hydrogen fuel blending from partial load to full load in a state-of-the-art 1,650 deg-C class M501JAC gas turbine.
- Verified low NOx and stable combustion using a “Dry Low NOx (DLN) combustor” with 30% hydrogen fuel mixed with natural gas.
- Utilized Takasago Hydrogen Park to perform integrated co-firing from hydrogen production to utilization in power generation application.

<https://www.mhi.com/news/23113001.html>

Decarbonization Technology

November 28, 2023 –MHI Succeeded Combustion Test of Ammonia Single-Fuel Burners

-- Promoting the Energy Transition with CO₂ Emission Reduction Technologies for Existing Thermal Power Plants --

PRESS INFORMATION

MHI Succeeded Combustion Test of Ammonia Single-Fuel Burners
 -- Promoting the Energy Transition with CO₂ Emission Reduction Technologies for Existing Thermal Power Plants --

2023-11-28

📧 | f X in

- Confirmation of stable combustion of ammonia and limited NOx emissions with newly developed burner
 - Technological development at Nagasaki Carbon Neutral Park to promote the use of ammonia, which does not emit CO₂ during combustion.



Ammonia combustion test equipment (0.5t/h furnace)

[PRESS INFORMATION]

- Confirmation of stable combustion of ammonia and limited NOx emissions with newly developed burner.
- Technological development at Nagasaki Carbon Neutral Park to promote the using of ammonia, which does not emit CO₂ during combustion.

<https://www.mhi.com/news/23112801.html>

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¡Muchas Gracias!

Panel #2: Colaboración entre Japón-México en el sector de Hidrogeno

Parte 1: Proyecto pionero de empresa Japonesa



MITSUI & CO.

7 de noviembre, 2024

Yuki Sugiyama

Presidenta del Comité de Infraestructura,
Camara Japonesa de Comercio e Industria

Operational Organization & Commitment to society

Operational organization of Mitsui is built upon two axes of product and regional expertise. Each of 16 Headquarter Business Units (HQ-BU) formulates comprehensive strategies for each product it is responsible for and promotes business activities around the globe. Regional Business Units and Blocs are entrusted to act independently as a cornerstone for our regional strategies. Through collaborative initiatives between each HQ-BU and Regional BU, we are able to realize an organic global network that exerts comprehensive strength.



About Mitsui / Global

Total assets

US\$ **111.9** billion

Revenue

US\$ **88.2** billion

Profit for the Year

US\$ **7.0** billion

Core Operating Cash Flow

US\$ **6.6** billion

Return of Equity

15.3 %

Global Network

61

countries/regions



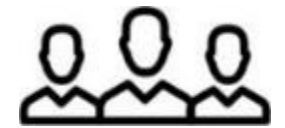
Number of Offices and Overseas Trading Affiliates

125



Number of Affiliated Companies for Consolidation

491



Number of Employees (consolidated)

53,602



As of Mar 31, 2024

The U.S. dollar amounts represent translations of the Japanese yen amounts at the rate of ¥122.00=U.S. \$1, the approximate rate of exchange on March 31, 2022.



Mitsui's Hydrogen Business Strategy

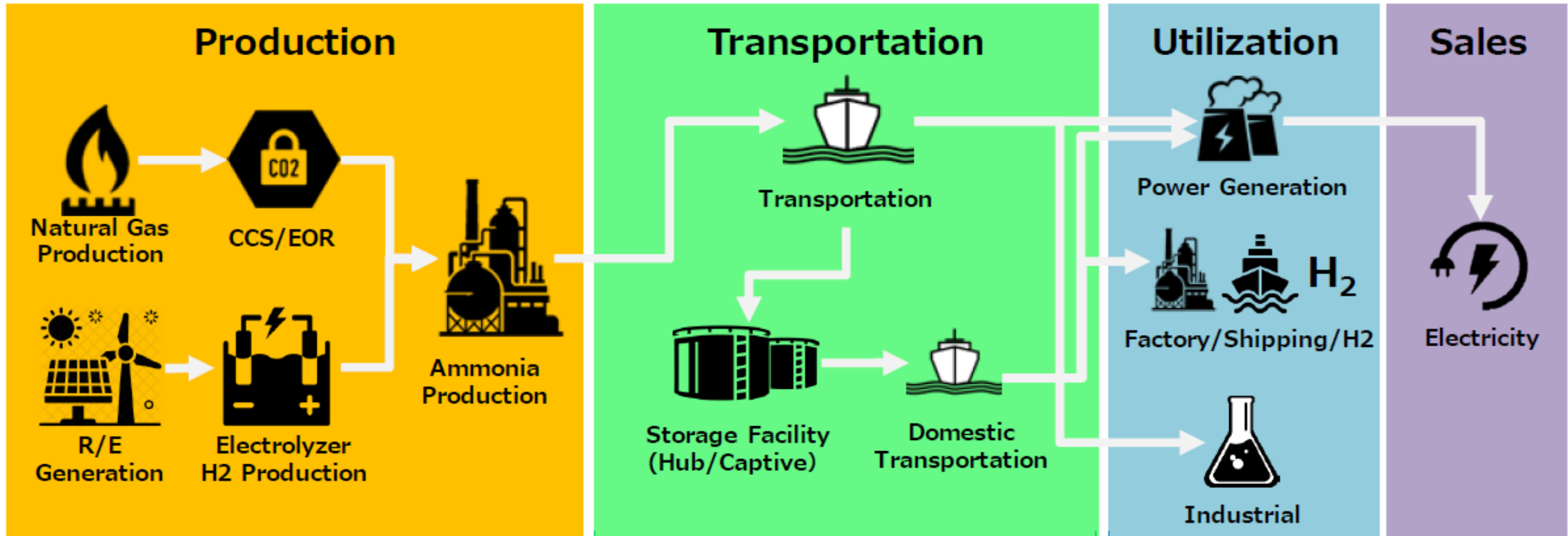


Phased approach aligned with *regulatory drivers* and *demand creation*

- **Short Term:** Regional demand/supply for **Mobility** sector
- **Mid Term:** Regional demand/supply for **Industrial** sector
- **Long Term:** Large scale International H2 **Value Chain**



Mitsui's Clean Ammonia Supply Chain



Robust **E&P, CCS** and ammonia production business experience

Over **40 years** experience in ammonia and **LNG** business

Various **knowhow** on logistics including domestic transportation

Strong customer network to **aggregate various ammonia demands**

Capacity to provide **one-stop holistic CN solutions**, including biomass supply, carbon credit and CCUS

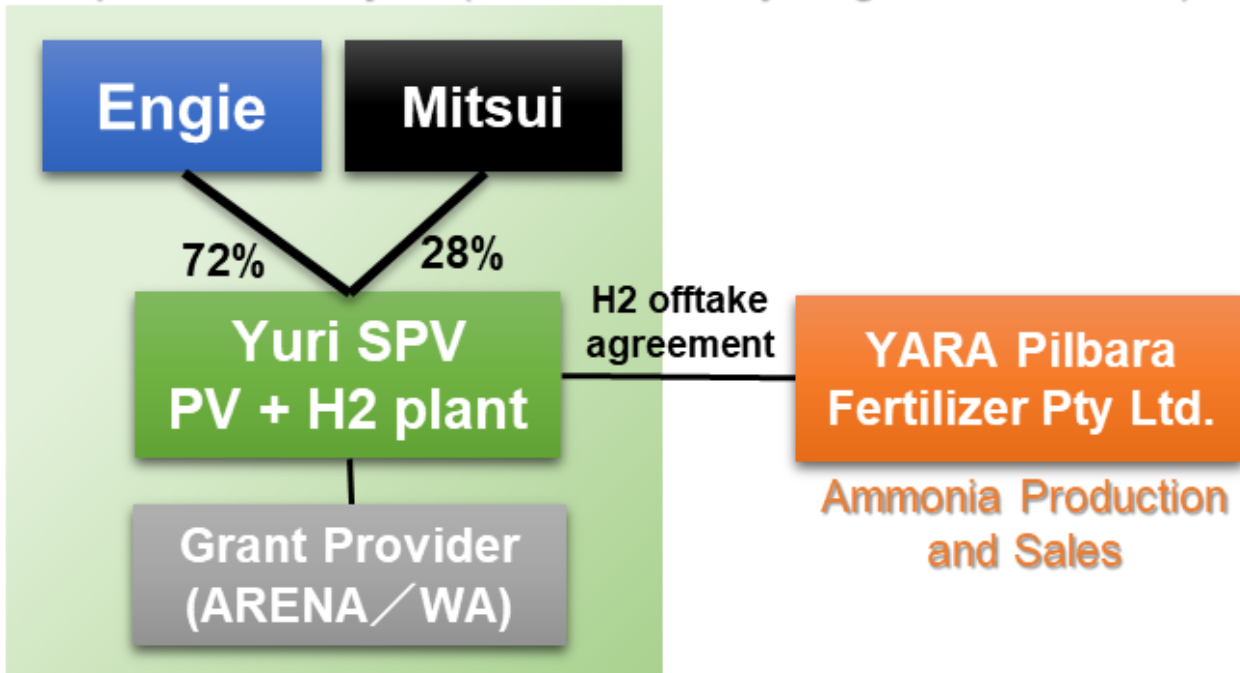
Yuri Green Hydrogen Project (in Australia)



1st commercial scale Green H2 production in Australia

Owners:	Engie/Mitsui
Location:	Pilbara, Western Australia
Capacity:	Solar 18MW Electrolyzer 10MW Battery 8MW/ 5MWh
H2 Volume:	Up to 640 tons/yr
Offtaker:	Yara (Fertilizer producer)
Schedule:	Construction start Dec 2022 COD 2024

Scope of the Project (Renewable Hydrogen Production)



Yuri Green Hydrogen Project (Australia)



Governmental Support is a “Must” to make Hydrogen projects feasible.

- Australian Federal government (ARENA)

*ARENA: Australian Renewable Energy Agency

- State government of Western Australia

Muchas gracias!

360° business innovation.

メキシコ日本商工会議所



*Cámara Japonesa de Comercio
e Industria de México, A.C.*



MITSUI & CO.



CCE - CJCIM

水素覚書締結

Firma de Memorándum de
Entendimiento sobre el Hidrógeno entre
CCE - CJCIM



JBIC-Bancomext 覚書締結

Firma de Memorándum entre Banco Japonés de Cooperación Internacional (JBIC) y Bancomext



Marcelo Ebrard

經濟大臣御挨拶

Secretario de Economía
Marcelo Ebrard
Gobierno de México



閉会挨拶
竹原実行委員長

Presidente del Comité del 60º aniversario
Satoshi Takehara
Cámara Japonesa del Comercio e Industria



ネットワークキング

Networking



お帰りの際の注意事項

- 同時通訳機器をご返却ください
Por favor, devuelva su equipo de interpretación simultánea.
- 車で来られている方は特別料金でご利用いただけるよう
駐車券に押印します
Si viene en coche, le sellaremos el ticket de estacionamiento con una tarifa especial.
- 粗品をお受け取りください
Por favor, acepte el obsequio.