



LNG DEVELOPMENT IN PERÚ

For Export and Local market



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REDLAND
ENERGY PROJECT DEVELOPERS

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- **Market Guidelines**
 - LNG for Export
- LNG for Local Market
 - Economic Impact

DEVELOPED MARKET

Production/Import

Storage

Wholesale supply

Transport

Distribution

Retail Supply

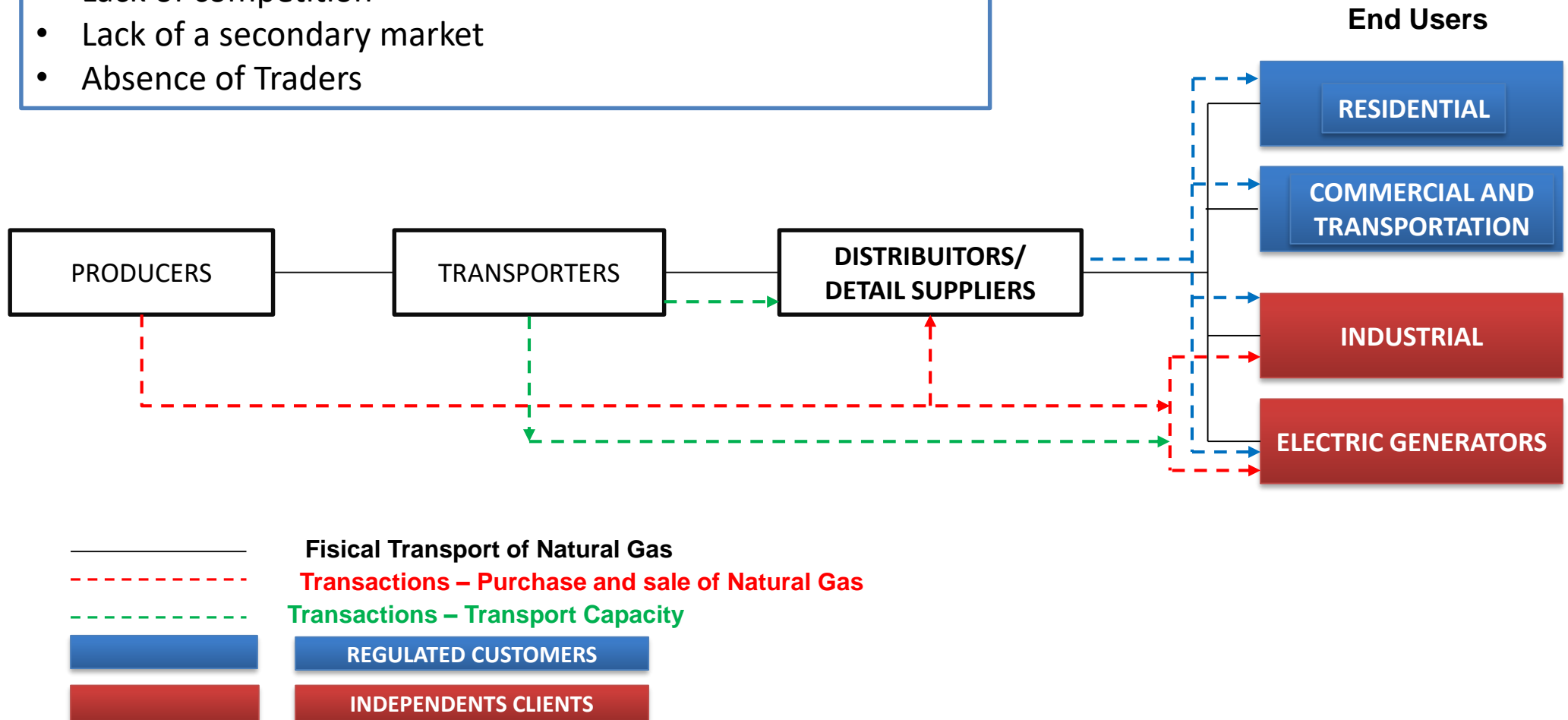
**Services subject to
regulation**

Competitive services

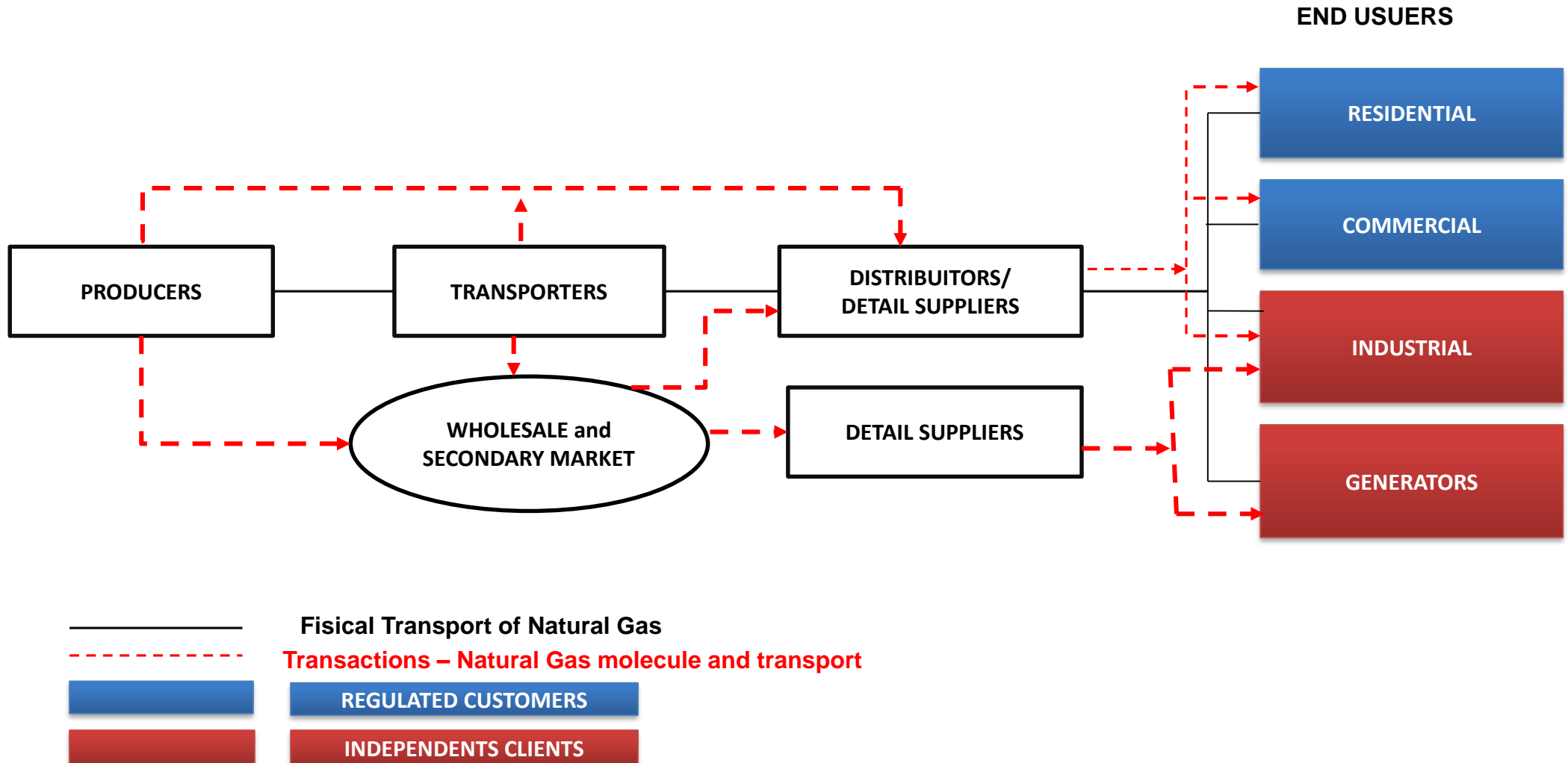
**Potentially
competitive services**

NATURAL GAS PERUVIAN MARKET

- Lack of flexibility
- Lack of competition
- Lack of a secondary market
- Absence of Traders



NATURAL GAS MARKET EVOLUTION



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NATURAL GAS PIPELINE FROM THE CAMISEA FIELD

ROUTES AND EXPORT DESTINATION

LA EXPORTACIÓN

REFERENCIAS:

— Gas natural o seco (uso interno) - 814,20 km.
De Malvinas a Lima.

— Gas (para exportación) - 408 km.
De Chiquintirca a Chincha.

Inversión:

US\$ 3,800 millones

Ingresos que generará:

US\$ 1,700
millones anuales

¿Qué hace la planta de licuefacción de Pampa Melchorita?

Enfría el gas a **-163°C**. Así su volumen se reduce **600 veces** para lograr un mayor transporte.

DESTINOS AL EXTERIOR

Carnisea

Malvinas

Chocronari et al.

Paratori 6

Pongo 9

R. Poyentimani

Mangoritari

Alto China

hiato  Alto

○ Consolidate

Figure 10

n Antonio

CUSCO

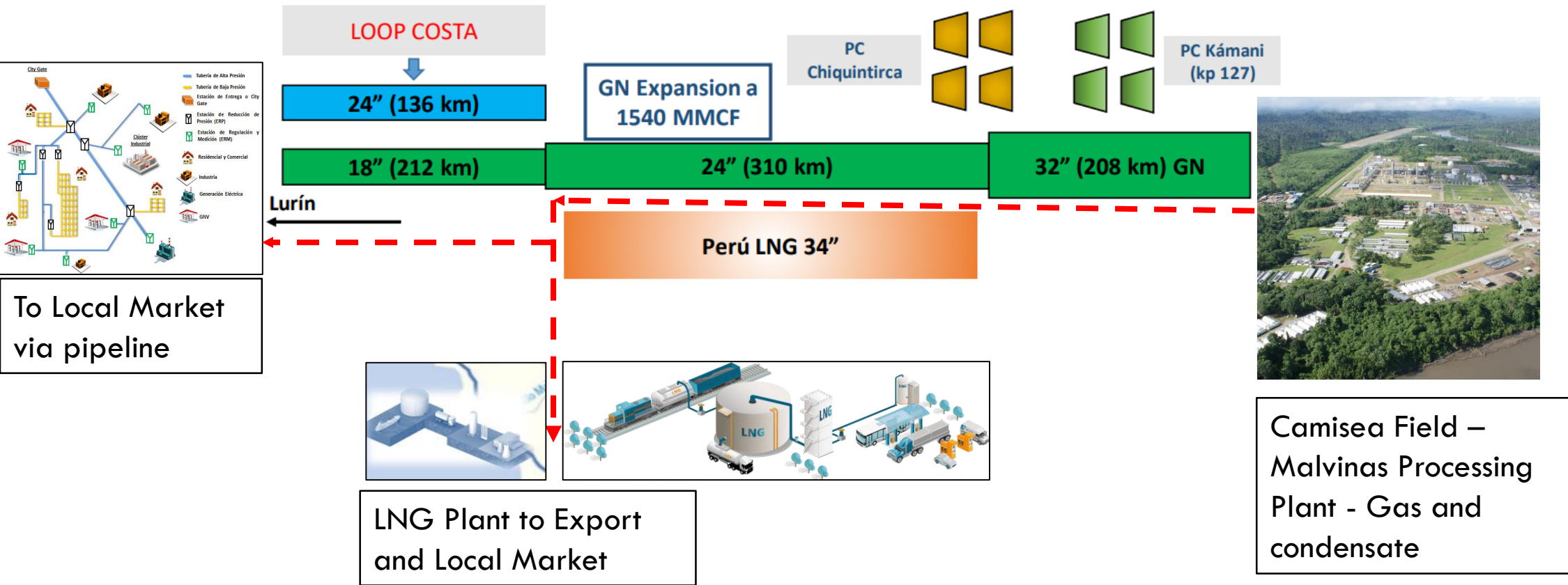
20

60 km

APURÍMAC

60 km

NATURAL GAS PIPELINE FROM THE CAMISEA FIELD TO THE MARKET



Source: Osinergmin Data

NATURAL GAS AND LIQUIDS PIPELINES FROM THE FIELD TO THE MARKET

Natural Gas

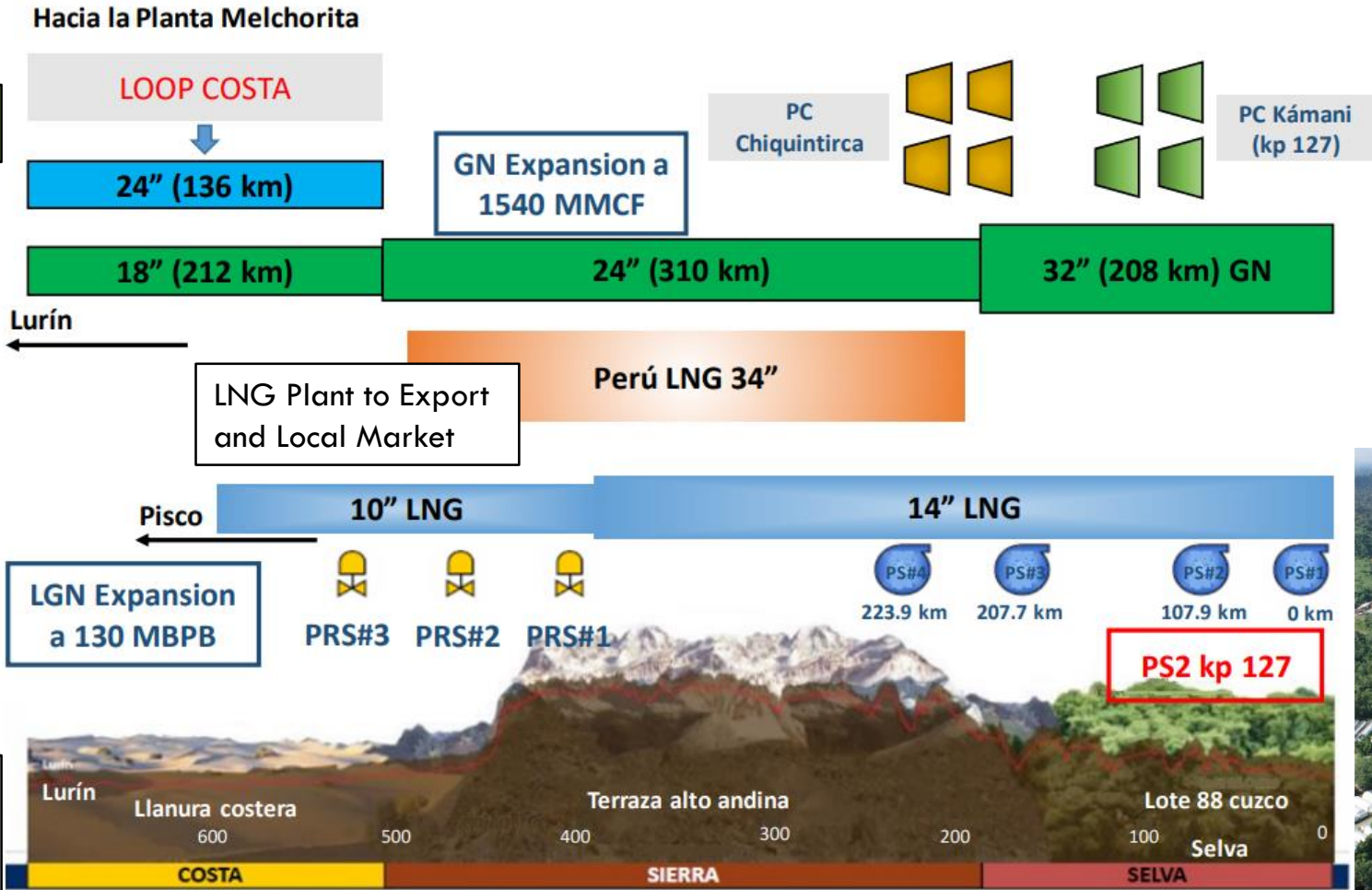
Natural Gas To Local Market via pipeline

Liquids

Process plant



Liquids and LPG To Local Market and Export



Camisea Field – Malvinas Processing Plant - Gas and condensate



Elaborado por División de Supervisión de Gas Natural, OISNER

Source: Osinergmin Data

LNG EXPORT, PAMPA MELCHORITA, PERU

GAS PIPELINE OF 408 KILOMETERS.

**PROCESSING PLANT WITH CAPACITY TO
PROCESS 625 MMPCD OF NATURAL GAS**

TWO TANKS TO STORE 130000 M3 OF LNG

COSTO TOTAL INFRAESTRUCTURA PERÚ LNG

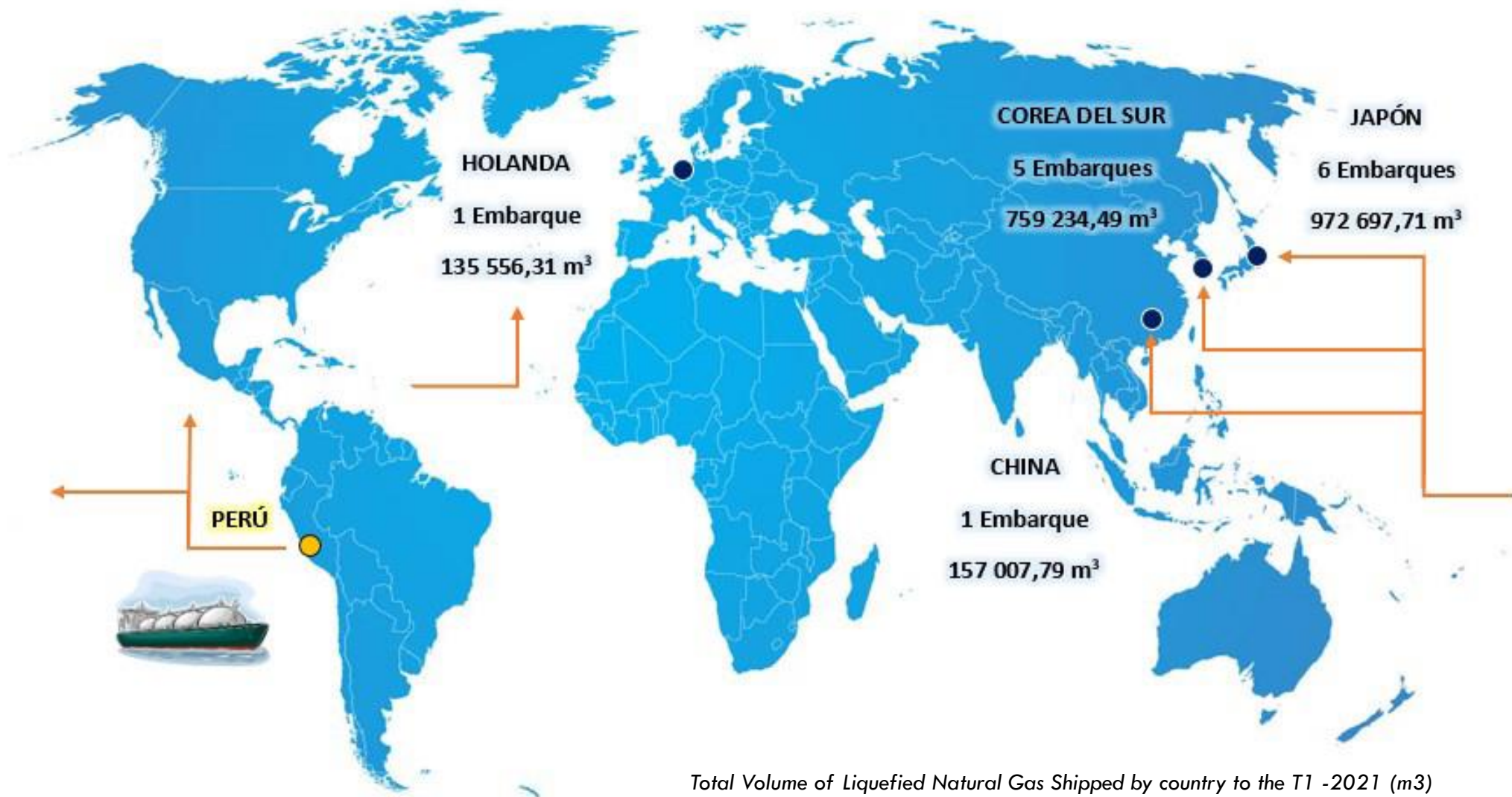
USO	miles de US\$	PARTICIPACIÓN %
Contratos de construcción EPC	2.333.912	61 %
Costos del ducto	824.294	22 %
Otros costos	674.354	18 %
Total	3.832.560	100 %

Source: Equilibrium Risk Rating Agency

Vista panorámica de la planta de
licuefacción de gas natural en Pampa
Melchorita, departamento de Lima.



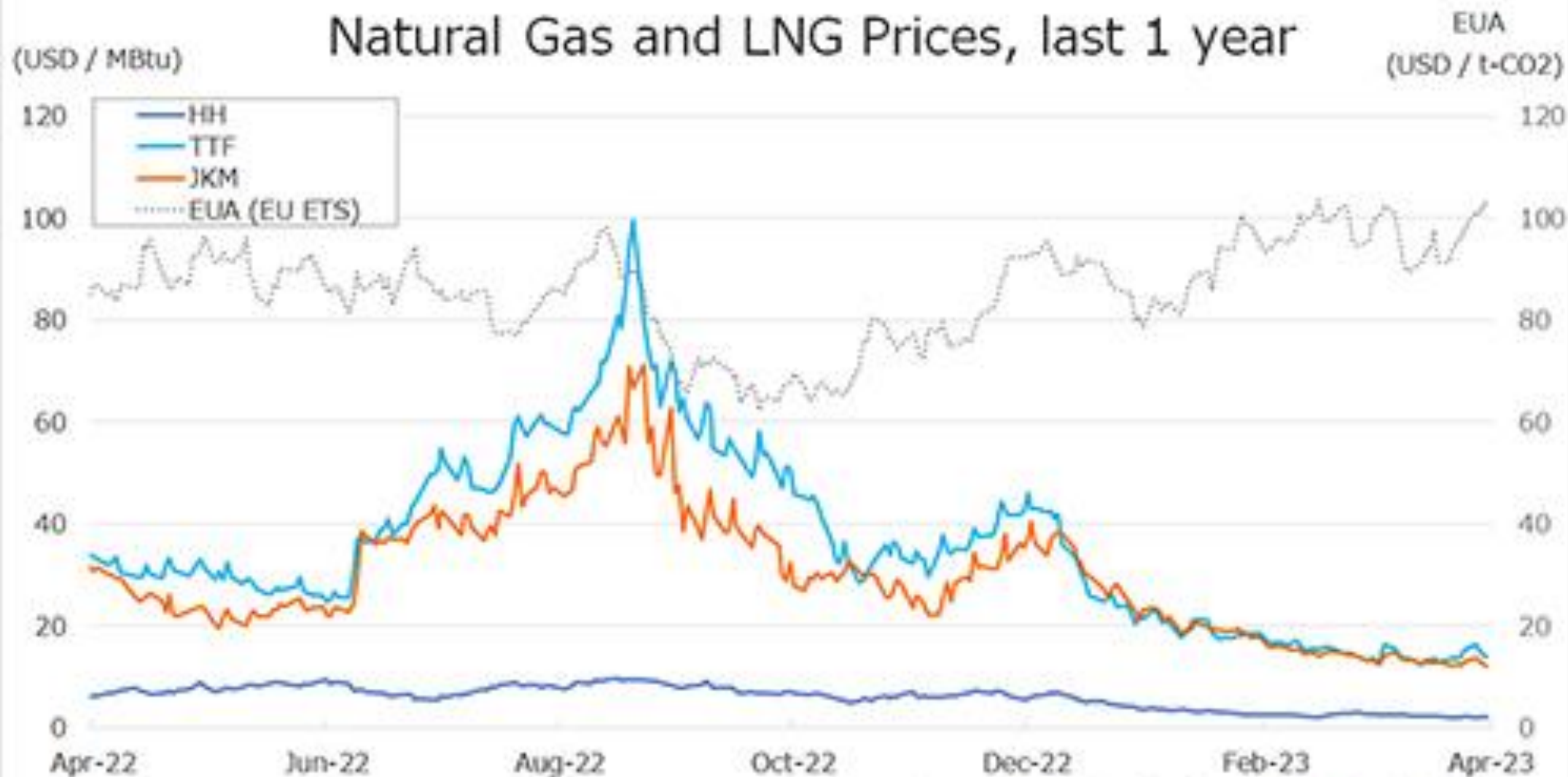
EXPORT MARKETS FOR LNG 2021



Total Volume of Liquefied Natural Gas Shipped by country to the T1 -2021 (m3)
División de Supervisión de Gas Natural [Daily report of Perú LNG to OSINERGMIN, 2021]

LNG PRICES FOR EXPORT MARKET

Natural Gas and LNG Prices, last 1 year



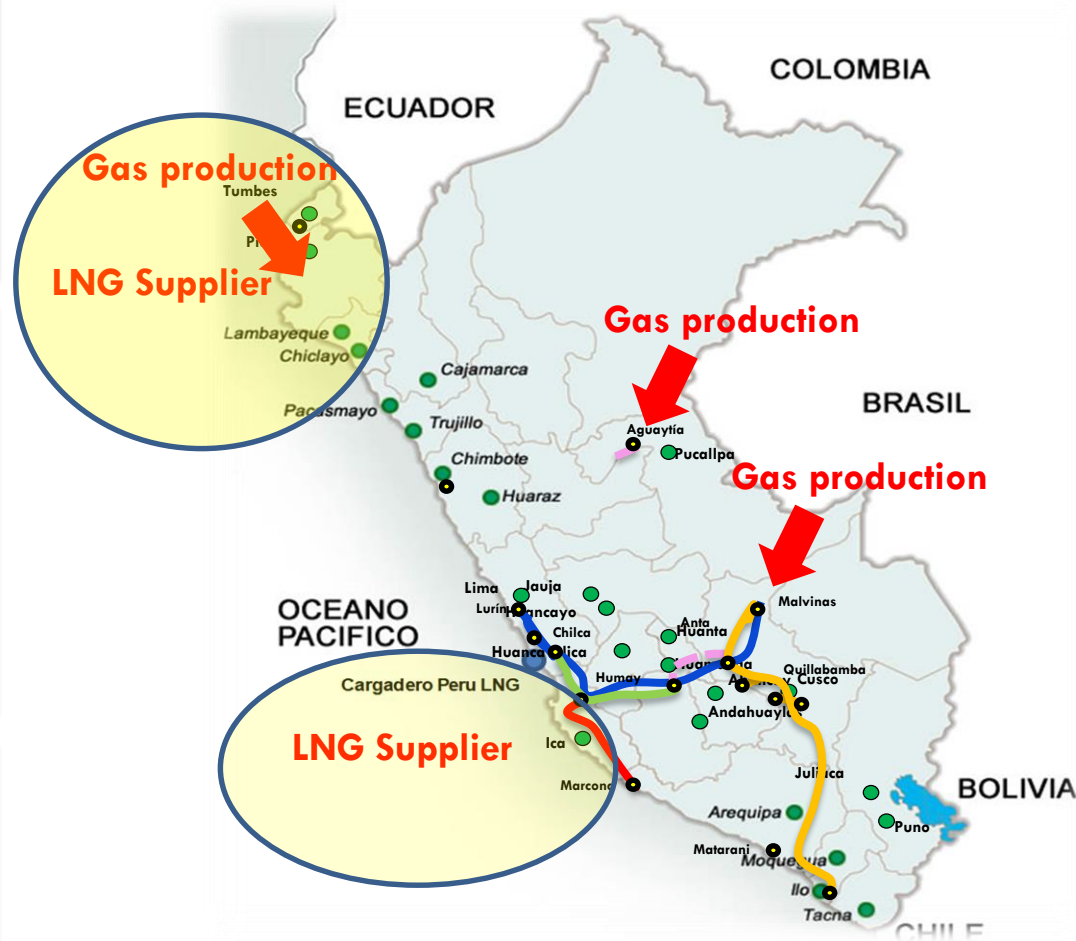
Source: S&P Platts (refer to Disclaimer), ICE, CME

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LOCAL MARKET

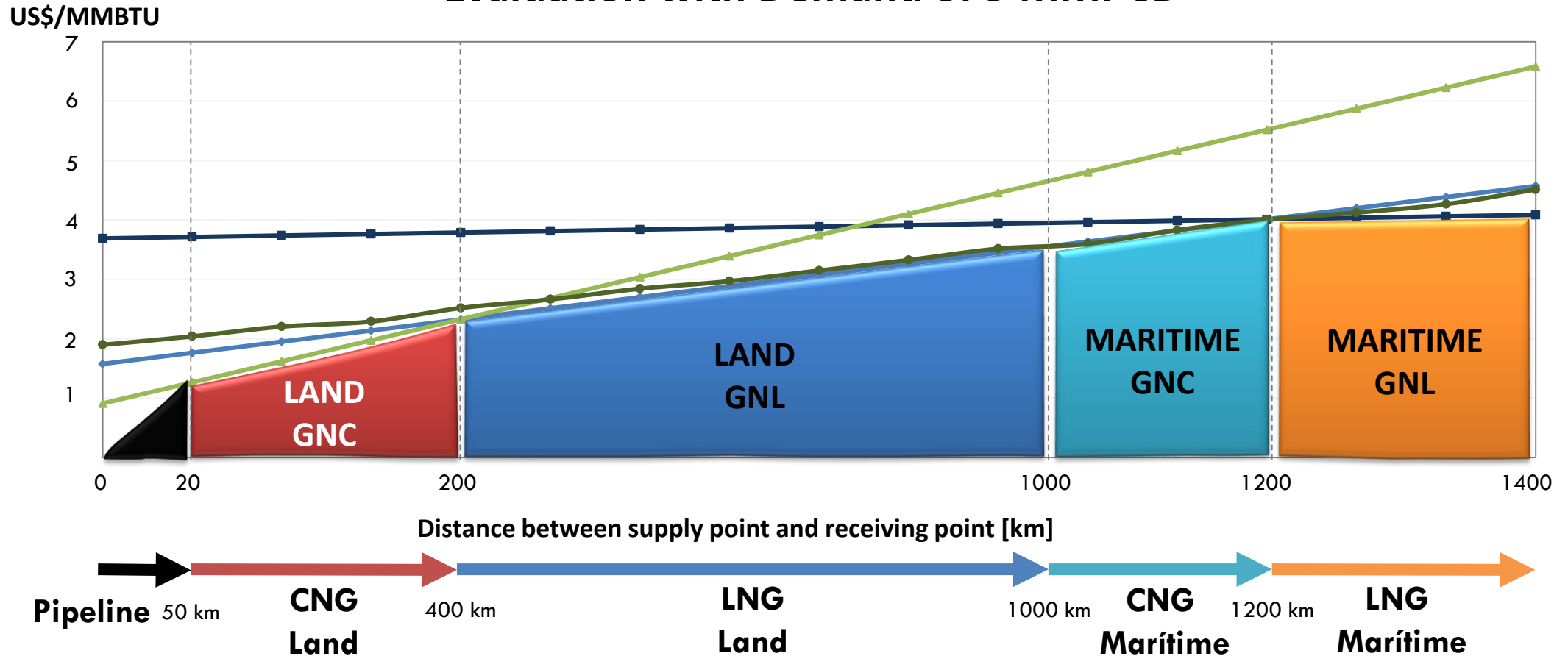


- Promote the diversification of gas production sources.
- Evaluate the most competitive technology to reach local markets.
- The evaluation of the final price will define the project to follow.- Pipeline vs LNG vs CNG.
- LNG is a way to expand gas consumption in the local market.
- LNG is generally more competitive than liquid fuels.
- It is more convenient to use locally produced LNG than to import liquid fuels.
- Develop a competitive LNG wholesale market.

Economic Evaluation of CNG vs LNG vs PIPELINE to Local Market

The demand and the distance of the markets will define the competitiveness

Evaluation with Demand of 9 MMPCD



Source: self-development

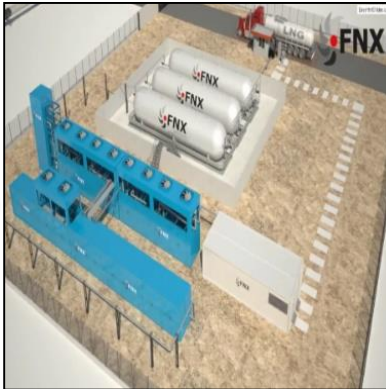
SMALL SCALE LNG TO LOCAL MARKET

SUPPLY CHAIN

WELL



SSLNG Plant



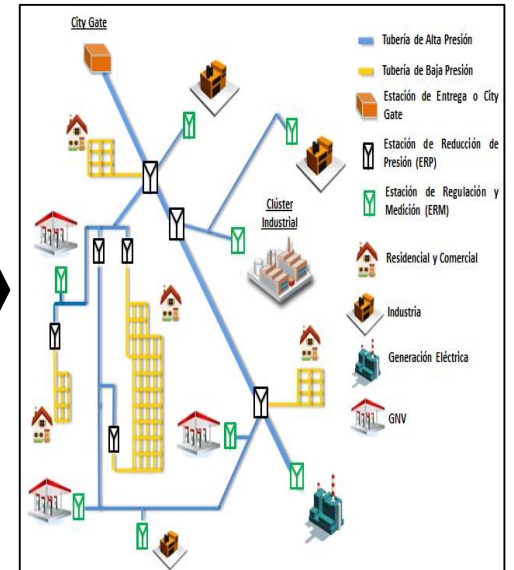
TRANSPORT



REGASIFICATION



LOCAL DISTRIBUTION



SMALL SCALE LNG CHAIN AND COMPETITIVE WITH PIPELINE



Usuarios Finales

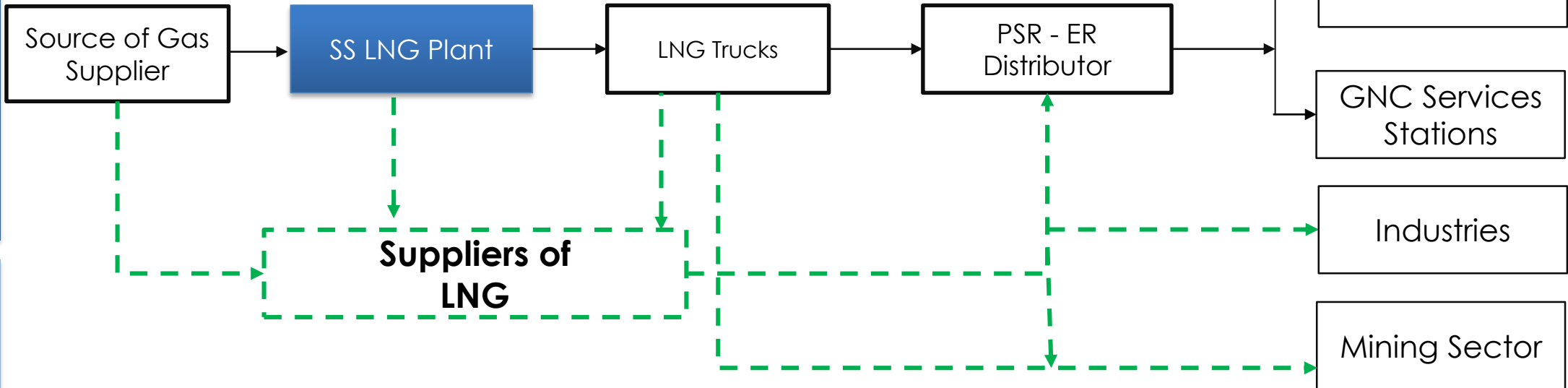
Residential

Commerce

GNC Services
Stations

Industries

Mining Sector









PSR: Satellite Regasification Plant

———— Fisical Transport of Natural Gas

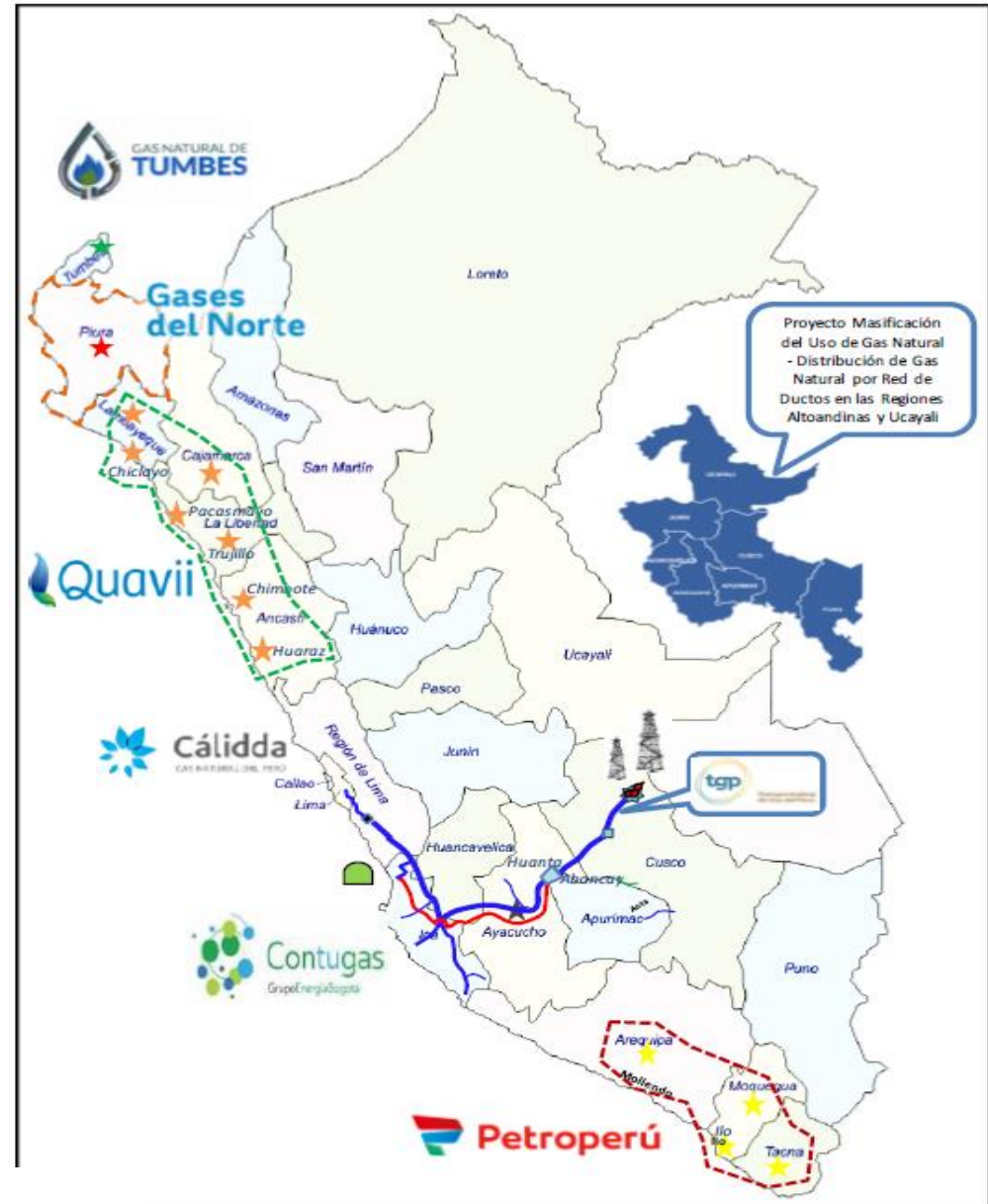
- - - - Trading of Natural Gas

Source: self-development

LNG AND PIPELINES TO LOCAL MARKET CONSUMERS

	supply by LNG
	supply by LNG
	supply by pipeline
	supply by pipeline
	supply by LNG/CNG
	S upply by pipeline

Source: Osinergmin Data/ self-development



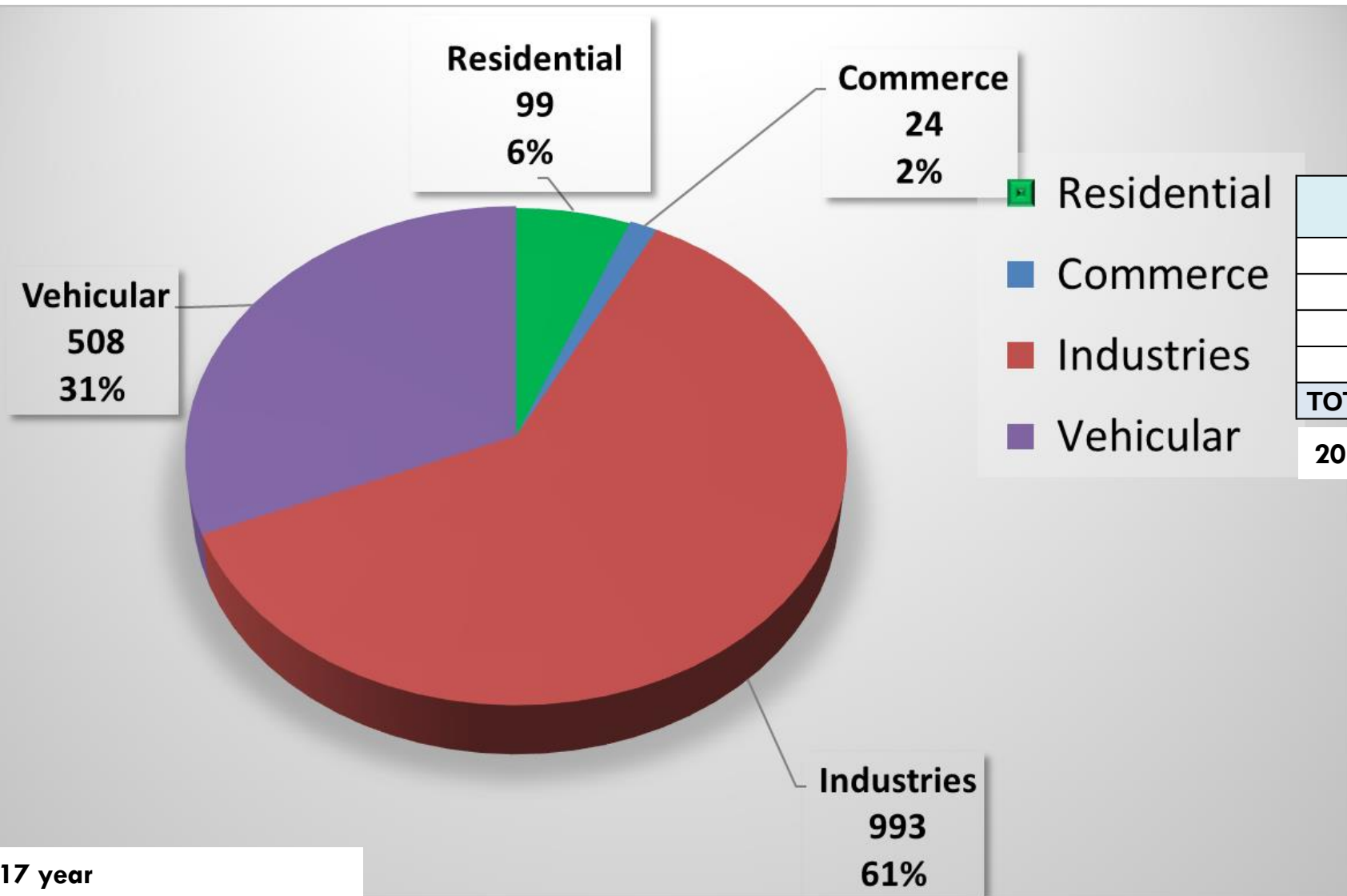
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DIRECT BENEFITS FOR SUBSTITUTION OF LIQUIDS FUELS

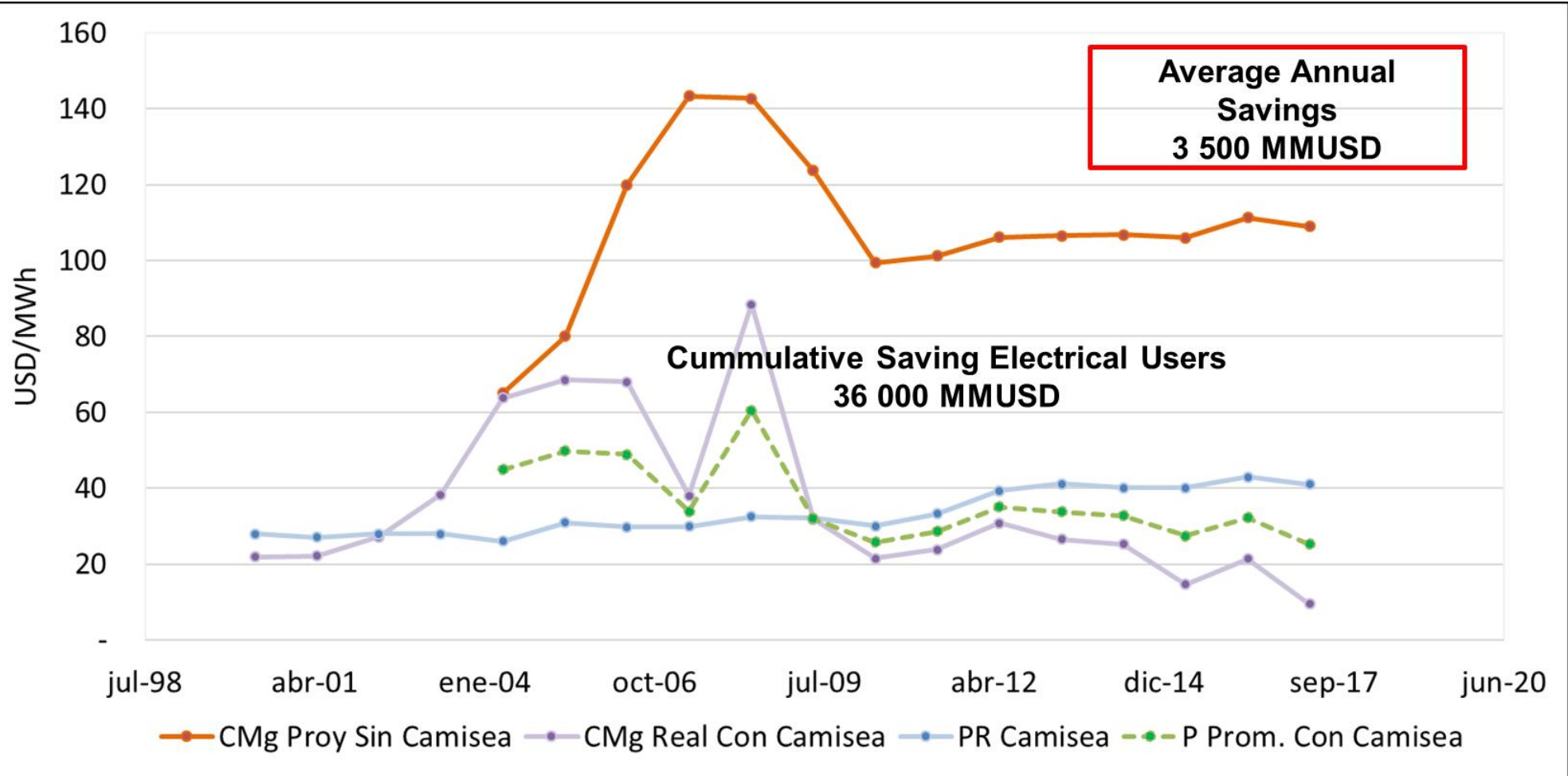
1 624 MMUSD/year of Saving for Industries, Commerce, Vehicles, Residential sectors



Source: Osinergmin Data/
self-development

DIRECT BENEFITS FROM THE USE OF NATURAL GAS IN POWER GENERATION

3500 MMUSD/ year of Saving for the Electrical Users



DIRECT BENEFITS FROM THE USE OF NATURAL GAS

The Natural Gas increase GDP by 0.8 percent per year, according with the IDB (*)

(*) In the study commissioned by the Inter-American Development Bank (IDB), Apoyo Consultoria reports that the project will increase Peru's gross domestic product by 0.8 percent annually until 2033, when the project's life cycle is expected to end. The firm focused solely on the benefits of the Camisea Natural Gas Project.

Thank You

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