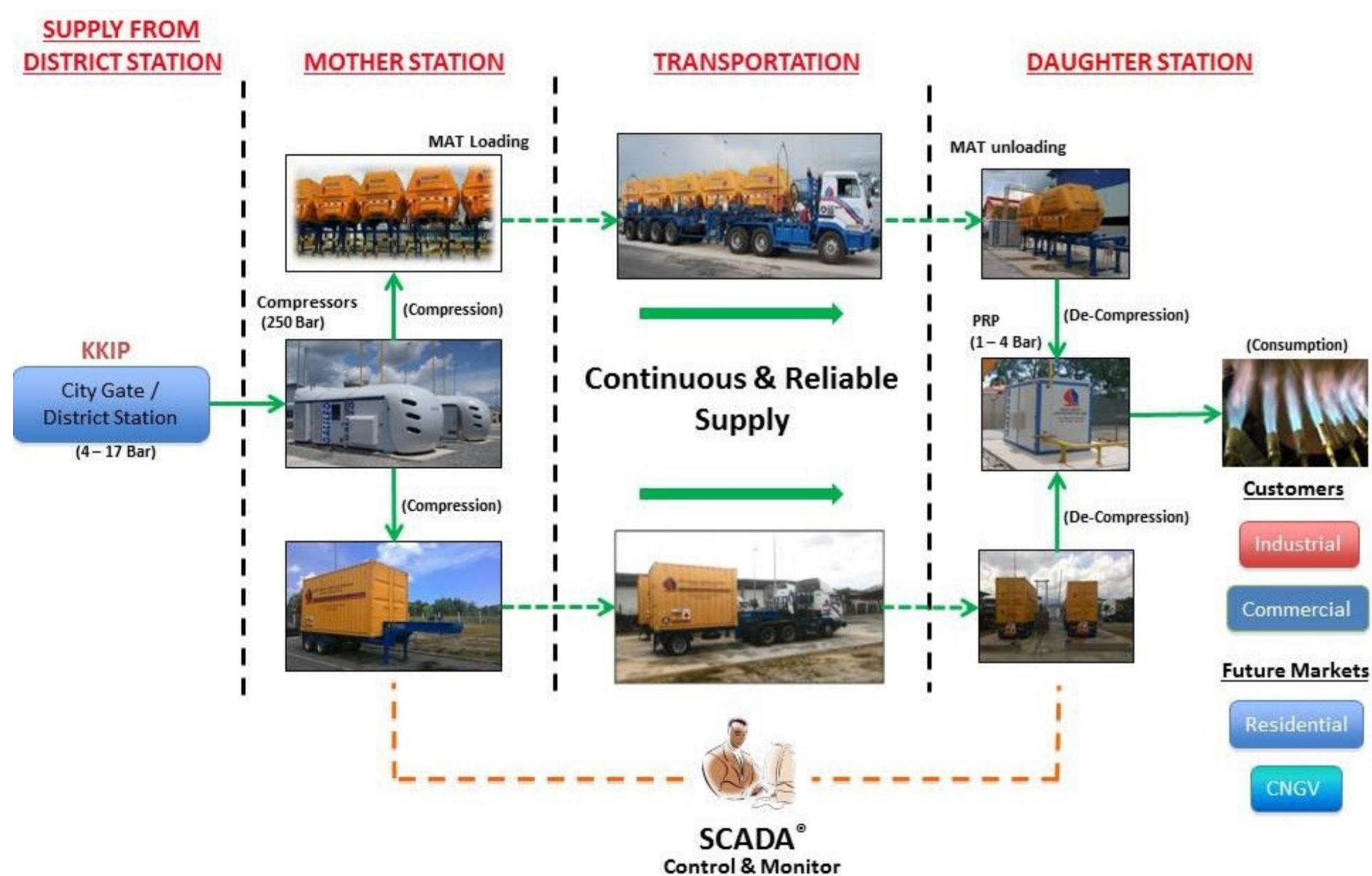




COMPRESSED NATURAL GAS (CNG) VIA VIRTUAL PIPELINE SYSTEM (VPS)

WHAT IS CNG VIA VPS?

- A fully-module design system that allows for quick, easy & cost-effective construction & expansion.
- A mother – daughter station concept.
- Mother Station is located at KKIP & Daughter Station is located at customers' premise
- CNG is de-pressurised for usage by the customer as fuel in their operation.
- The continuity of gas supply is fully ensured by timely replenishment of fully charged MATs & the removal of depleted MATs through online SCADA monitoring.



HOW IS CNG OBTAINED?

CNG is made by compressing natural gas, (which is mainly composed of methane, CH₄), to less than 1% of the volume it occupies at standard atmospheric pressure. It is stored & distributed in hard containers at a pressure of 20-25 MPa (2,900-3,600 psi), usually in cylindrical or spherical shapes.

WHAT IS THE DIFFERENCE BETWEEN CNG & LPG?

CNG is mainly methane compressed at a pressure of 200 to 248 bars. LPG is a mixture of propane and butane liquefied at 15 °C and a pressure of 1.7 - 7.5 bar. Some variants of LPG are primarily propane so LPG is often colloquially called propane. CNG is cheaper and cleaner, but LPG has a higher calorific value. Distribution is easier for natural gas over long distances via pipelines.

BENEFITS OF USING CNG

- COST SAVINGS**
 - Natural gas is a high quality, efficient & economical energy source.
- CLEAN**
 - Releases the least amount of carbon dioxide of equivalent energy released. There is no emission of ash or soot to contaminate the air.
- FUEL-EFFICIENCY**
 - When the entire cycle of producing, processing, transporting & using energy is considered, natural gas is proven to be highly fuel-efficient.
- UNINTERRUPTED SUPPLY**
 - The pipeline delivery system is secure, stable & protected from weather-related disruptions to ensure continuous supply.
- SAFE & EASY TO CONTROL**
 - Natural gas is easy to detect & controlled at the point of use. Lighter than air & readily disperses.

