STRANDED NATURAL GAS?
NO PROBLEM!

NAME _____

Part 1: WHAT'S YOUR PROBLEM?

Below are 10 important facts related to natural gas.

1. Read each fact.
2. Using a pencil, draw connections to show how at least five of the facts relate to one another.
3. Then, on the lines below, write a problem statement that includes information from at least two of the facts you connected. Your problem statement should:
   a. be specific
   b. consider who the problem impacts
   c. consider what, where, and when the problem occurs
   d. explain why or how it is a problem
4. Finally, with other group members, brainstorm as many solutions as you can for the problem you stated.

Natural gas is the cleanest burning fossil fuel.	Some of the ocean's reservoirs of natural gas are thousands of miles from land or from the nearest pipeline. This is called stranded natural gas.
About 25% of energy used in the United States came from natural gas in 2010.	Transporting stranded natural gas via pipelines would be costly and impractical.
Natural gas is an important component of a sustainable global energy mix.	When natural gas is chilled, it becomes liquefied (LNG) and takes up 1/600th of the volume of its gaseous state.
The vast majority of natural gas is transmitted through pipelines.	LNG is easier and more practical to transport than natural gas, particularly by sea.
Deep beneath the world's oceans are huge reservoirs of natural gas.	The most efficient way to transport natural gas, where pipelines cannot be built, is in the form of liquefied natural gas (LNG).

Problem Statement: _____

(cont.)

Part 2: WHAT'S THE SOLUTION?

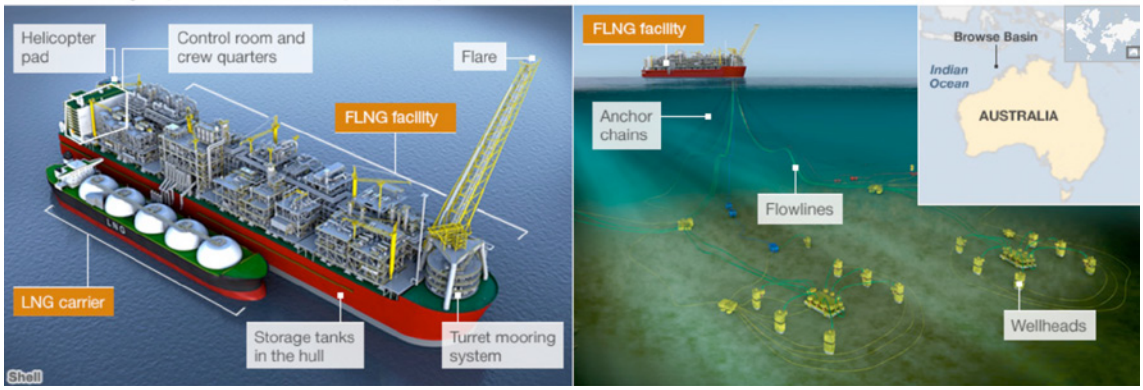
FLNG (floating liquefied natural gas) is a water-based liquefied natural gas operation that floats above an offshore natural gas field and essentially produces, liquefies, stores, and transfers liquid natural gas right at sea.

What Is Liquefied Natural Gas (LNG)?

Note: Insert Insert Figure 2 from Liquefied Natural Gas: Understanding the Basic Facts, U.S. Department of Energy, 2005.
http://www.fe.doe.gov/programs/oilgas/publications/lng/LNG_primerupd.pdf

What Is Floating Liquefied Natural Gas (FLNG)?

Shell's Floating Liquefied Natural Gas (FLNG) Project



FLNG will help to unlock vital energy resources all over the world. The Prelude FLNG facility, which is currently being built, will be longer than four football fields and will weigh more than six times as much as the largest aircraft carrier. By 2017 the vessel should be anchored off the north coast of Australia, where it will be used to harvest natural gas from Shell's Prelude field. Once the gas is on board, it will be cooled until it liquefies and stored in vast tanks at –161°C. Every six or seven days, a huge tanker will dock beside the platform and load up enough fuel to heat a city the size of London for a week. The tankers will then sail to Japan, China, Korea, or Thailand to offload their cargo.

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