

Power Island™ – Gas Turbine Mobile Technology

The industry downturn demands operators in O&G to find efficiencies in every aspect of the E&P process. There are several scenarios that require remote power and lots of it – Gas Turbine Mobile Technology is an efficient solution.

- Electric Motor Fracking
- Pad or Section Power
- Enhanced Oil Recovery (EOR)



The image above is typical and demonstrates how important footprint becomes.



Power Island is an industrial gas turbine generator with rapid deployment switchgear and transmission equipment. These generators can be pad mounted or trailer mounted for quick installation and removal. They can carry the load of an entire pad site or drilling section and can be operated with redundancy (as much as 100% back up power). The packages can operate in a partial to wide load range with as high as 98% availability.

In most cases, the units operate uninterrupted for one year without shut down and the engines (or entire packages in a trailer mounted configuration) can be removed from site for maintenance and replaced with a zero-hour machine without any interruption of service.

These generator sets are fuel flexible, operate efficiently on well head quality gas and have the capability of operating on liquid fuel as a backup.

Generator sets are available from 1 MW up to 25 MW (nominal) and operate at 480/4160 or 13,800 V at the generator terminals. All of the equipment associated with the generator sets can be monitored remotely by equipment experts to provide 24/7 technical support to the operators on site.

Electric Motor Fracking

No more diesel... Several manufactures have developed powerful AC induction motors designed to replace the diesel engines conventionally used to power fracking (hydraulic fracturing) pumps.

To power these motors and the frack pumps, we offer a “zero hour” version of several commercially available gas turbine generators, configured for trailer mounting. The Power Island system can be configured to deliver the electrical load required for the entire site. The system is designed with efficient mobility and rapid mobilization in mind – compact and transportable. Rapid deployment plans have been developed to follow the fracking crew, set up and power the pumps for a week and then move on to the next well site.

Benefits include:

- Power Island operates at the same voltage as the motors eliminating the need for heavy transformer and switchgear equipment.
- Potentially 40% less footprint.
- As little as 3 operators instead of 16 (typical personnel with fracking pumps and diesel power generation).
- Sound abatement.
- Low emissions.
- Power Island operates on pipeline or flare gas – no diesel required.



Pad or Section Power

Power Islands are flexible... They can be moved directly to the site or section and come equipped with all necessary HV/MV and LV equipment to support entire field operations. Major equipment such as generators, transformers and switchgear can be mounted on mobile trailers or containers for versatility and customization.

These mobile power islands can be purchased outright or are offered under an equipment lease contract creating a significant savings in dollars per kilowatt.

Because of the durability of the equipment, these systems can be installed and maintained for an indefinite period of time with little or no permitting issues.



Enhanced Oil Recovery

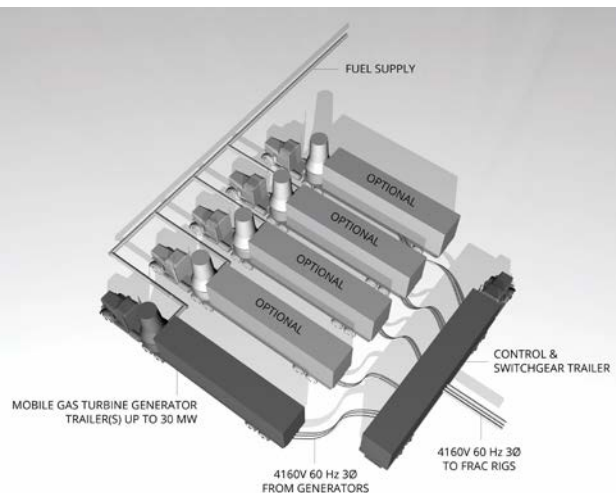
Gas injection pilot programs... Operators have been running EOR programs in the Eagle Ford and Bakken shale plays for several years. During the shale boom, EOR has been pushed to the backburner, generally thought of as a conventional method for old fields. But EOR is less capital intensive than primary drilling and the application makes sense as tight oil portfolios start to mature and cost efficiencies rise to the forefront of every operator's mind.

What also makes sense is using the natural gas coming from the well to power the site and drive the compressors injecting the gas into the reservoir. TTS' Power Island can generate the power necessary with reliability and efficiency.

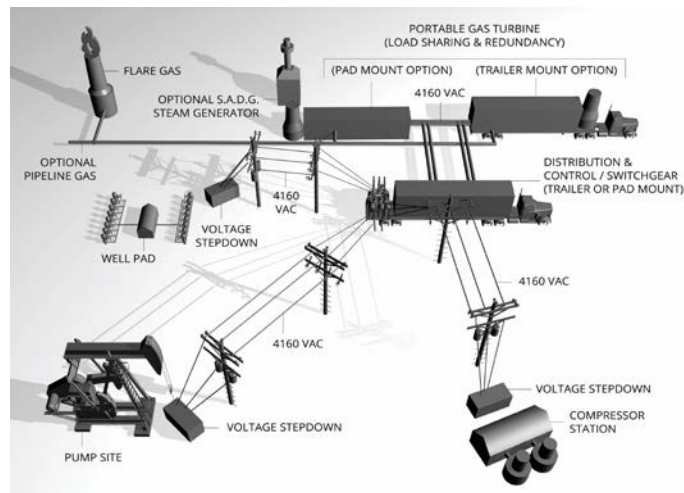


Flare Reduction

Power the well, pad or field burning NG from the well... Power Island is capable of generating electricity with residual wellhead gas. TTS has the capability of providing gas treatment equipment and generating equipment to convert your flare gas into equiv. electricity (MMBtu to kw). We can consolidate the gas flow from multiple wells and deliver to a generating site capable of providing the required power for the single well, pad or field.



Electric Motor Fracking



Pad or Section Power