Maximizing Efficiencies; Minimizing Environmental Impact

STEP’s Dual-fuel Solutions:

- STEP’s current dual-fuel fleet represents 132,500 HP
- Peak substitution rate of 65% (diesel fuel is replaced with liquefied natural gas) without loss of hydraulic horsepower
- Reduces carbon footprint
- Significantly lowers costs
- Creates efficiency in operations

STEP Energy Services is the leading expert in dual-fuel hydraulic fracturing operations and continues to expand its capabilities based on client demand. These pumps use a mixture of natural gas and diesel which reduces diesel usage, improves operational efficiency and minimizes the environmental impact. STEP approaches maximizing dual-fuel efficiency through the optimization of equipment layout on the project site, monitoring engine performance from the field and continually analyzing pump fleet metrics in the office. This ultimately leads to optimal dual-fuel substitution rates and a significant savings for operators.

How much gas are you flaring? What is the environmental impact? How does it impact your stakeholders? Explore the possibilities with dual-fuel:

- Cost savings
  - On average, clients have experienced 40-65% substitution rates which result in an approximate savings of $20-40k/day
- Reduced greenhouse gas emissions
- Consistent fuel supply
- Reduced “hot fueling”

What Clients Are Saying about STEP’s Dual-fuel:

“STEP has consistently delivered high natural gas substitution averages with their dual-fuel fracturing fleet – our last pad averaged 63% substitution while fracturing individual zones, peaking near 70% and delivering 50% substitution average over the entire operation. STEP’s focus on maximizing dual-fuel efficiency has translated into substantial fuel savings to our fracturing operations.”

- Shell Completions Superintendent, WCSB Operations

“While supplying a 100% dual-fuel fleet, STEP was able to achieve substitution rates of approximately 45% during fracturing operations over several pads. This turned into considerable fuel savings for us and helped to further reduce completion costs. In a challenging environment where a huge amount of effort is put into controlling costs, this strategy provided immediate, noticeable results, reducing our fuel cost by approximately 25%.”

- Seven Generations Completions Engineer
“We have used STEP’s dual-fuel fracturing pumps with our annular fracturing operations over the last few years and now with plug and perf; we are very happy with [STEP’s] ability to consistently provide high natural gas utilization. With current plug and perf operations, we are getting an average of 58% utilization, which transfers in to cost savings for Canbriam. Having STEP supply dual-fuel pumps, we burn less diesel fuel by substituting with our own natural gas, mitigating safety concerns such as spills and driving incidents by reducing the number of trucks on the road. This is the right way for our industry to be going.”

- Canbriam, Manager, Drilling and Completions

Visit [http://www.stepenergyservices.com/resources/dualfuelcalculator](http://www.stepenergyservices.com/resources/dualfuelcalculator) to calculate your potential cost savings.