

# Converting to Gas from Coal or Oil?

 **FORNEY** can Help!

*Put Forney's 85+ years of combustion experience to work on your gas conversion project.*

In today's market, with the low price of natural gas and its benefits of reduced NO<sub>x</sub>, SO<sub>2</sub>, and CO<sub>2</sub> emissions compared to coal or oil, it may be in your best interest to switch to gas. Whether it's environmental or economic factors causing you to look into converting a boiler to gas, Forney can help!

How Forney can help:

- Assist with conducting an assessment study. Forney has the industry contacts and expertise to do a thorough assessment of a plant's potential options.
- Replace existing coal burners with Forney PAF or VFP gas burners. With a VFP burner the existing air register may be able to be reused.
- If you need to maintain the ability to fire coal, Forney can supply custom gas canes or gas igniter retrofits.
- Replace oil igniters or burners with gas equivalents.
- Flame detector evaluation and replacement, if necessary
- Upgrade / re-configure BMS
- FD Fan sizing evaluation
- Select proper NO<sub>x</sub> reduction technique, if required, to fit the application, both technically and economically.
- Supply new gas fuel piping trains, including supply pressure reducing stations, header trains, burner and igniter safety shutoff valve assemblies.

## Things to consider:

- Have you completed an assessment study?
- Do you want to convert fully to gas or is augmenting the current arrangement with gas an acceptable option?
- What is an acceptable capacity derating for the boiler?
- Is the boiler operated at base load or modulated?
- Do you need to retain the option to fire coal in the future?
- Is natural gas available to the plant?

**Forney Corporation**

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800-356-7740 • Fax 972-458-6650 • [www.forneycorp.com](http://www.forneycorp.com)

For over 85 years, Forney has been providing customized combustion solutions to the power generation industry. Forney's experienced design teams will guide you through each project phase, from initial concept to onsite start-up and service. Whether a simple burner front retrofit or complete burner conversions, Forney offers a wide range of products and project expertise:

## BURNER MANAGEMENT SYSTEMS

From stand-alone applications to seamless integration into the plant automation system, Forney builds and customizes BMS systems to your requirements.

## BURNERS, IGNITERS AND FLAME DETECTION

For new plant construction or existing plant upgrades, Forney's position as a leading supplier of burners, igniters, flame detectors, valve systems, fuel trains and all supportive equipment can be uniquely leveraged to support your combustion applications.

### MAXFIRE® GAS IGNITERS

- Class 1, 2, or 3 gas igniter rated 90KW to 14.7MW
- Superior reliability and stability using two stage ignition with a protected primary combustion zone
- Low cooling / combustion air requirements
- Small diameter fits most applications
- Quick release assembly and self-cleaning spark tip for reduced, easy maintenance
- Fixed or retractable options



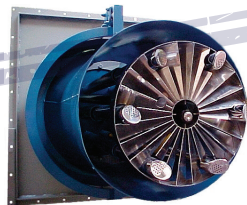
### UNIFLAME® II FLAME DETECTOR

- Optimal flame detection and discrimination
- Fully integrated dual UV and IR sensors and amplifier
- Extensive programming options for advanced tuning on multiple fuel applications
- Two independent flame relays and 4-20mA outputs
- User friendly multi-functional VFD display / keypad
- RS485 Modbus communications
- Standard housing is NEMA 4X (IP66); Class I Div 2 Group A,B,C&D; Ex nA nC IIC T4, SIL 3 (IEC 61508)



### GAS BURNERS

- Parallel Airflow Burner (PAF) Burner
  - Used for low excess air applications and high heat release furnaces.
- Variable Flame Profile (VFP)
  - A PAF with adjustable air louvers
  - Ideal for short furnaces



### D85 UV/IR FLAME DETECTOR

- Fast installation with automatic programming
- Fully integrated UV or IR sensor and amplifier
- Flame relay and 4-20mA flame quality output
- Smart LED display / keypad for tuning and diagnostic indication / analysis
- Multiple programming options for threshold tuning
- Standard NEMA 4X, IP66 housing for Class I, Div 2 environments



### HESI (HIGH ENERGY SPARK IGNITER)

- High energy, self-cleaning spark for reliable ignition
- ~ 3 sparks per second at 12J per spark (36J/sec)
- Detachable spark rod / tip for easy replacement
- Panel or wall mount power pack
- Fixed and retractable models



### FUEL SKID / VALVE TRAIN

- Superior fuel control
- Designed to NFPA 85 standards
- Manufactured to B31.1 requirements
- Class I Div II standard with custom designs available for electrical hazardous area classifications



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