



The Methanol Cracker

Reliable, Cost-Effective Hydrogen Production

The Product



- *Generates hydrogen from methanol and water.*
- *Hydrogen powers fuel cells that produce electricity: EXAMPLE – 30kW fuel cell can produce electrical power @ **\$.06 per kWh***
- *Methane is easily sourced through **local fuel jobbers.***

How It Works



- Methanol is mixed with demineralized water.
- The mixture is super-heated to create a catalytic process with the *super-heated gasses*.
- The gas mixture is sent to a *Pressure Swing Absorption (PSA) unit for purification*.
- The purified hydrogen can then be used to *power on-site hydrogen fuel cells*.

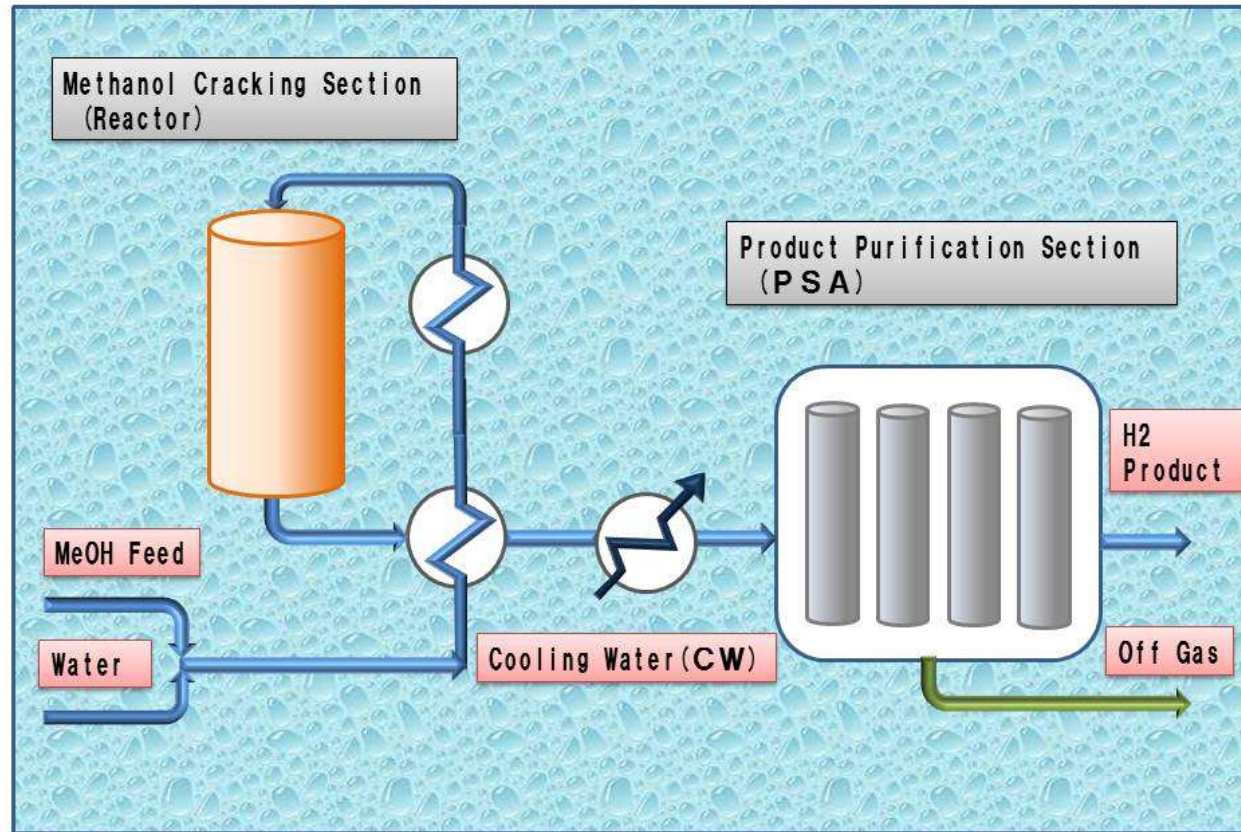
How It Works



30 kW Hydrogen (H₂) Fuel Cell

- *H₂ fuel cells can be sized from 30 kW to 1 MW plus, depending on customer needs.*
- *Methanol is a readily available as a low-cost fuel source.*
- *Methanol provides high-density hydrogen per molecule efficiency and delivers high-quality hydrogen fuel onsite.*

Application Examples



Powering Appropriately Sized H² Fuel Cells

- *Electrical vehicles.*
- *Residential and commercial buildings.*
- *Data centers.*
- *Remote locations.*
- *Emergency power backup.*

Methanol Cracker Benefits



- *Low investment and operating costs.*
- *Hydrogen powers fuel cells and produces carbon **ZERO EMISSIONS**; water vapor is the only discharge.*
- *Decentralized production; **hydrogen is produced onsite.***
- *Hydrogen provides **kWh production at a fraction of standard rates.***
- *High efficiency , low maintenance.*



Tax Credits



Section 45V of the Internal Revenue Code (IRC)

- *The **Clean Hydrogen** Production Credit*
 - *System construction must begin before January 1, 2033*
 - *Up to **\$3.00 per kg of hydrogen produced.***
 - *The credit is available for **10 years** after the facility is placed in service.*
 - *Customer may choose an alternative **ITC of up to 30% ONE TIME.***
 - *These are Section 45V highlights; **professional, third-party tax guidance is recommended and available through MTD.***

What We Need to Get Started



- *12-18 months of utility bills: gas/propane and electricity.*
- *Facility floor plan/space available.*





Information provided by
Baker Tilly CPA and
Renewable Tax Experts

Questions?