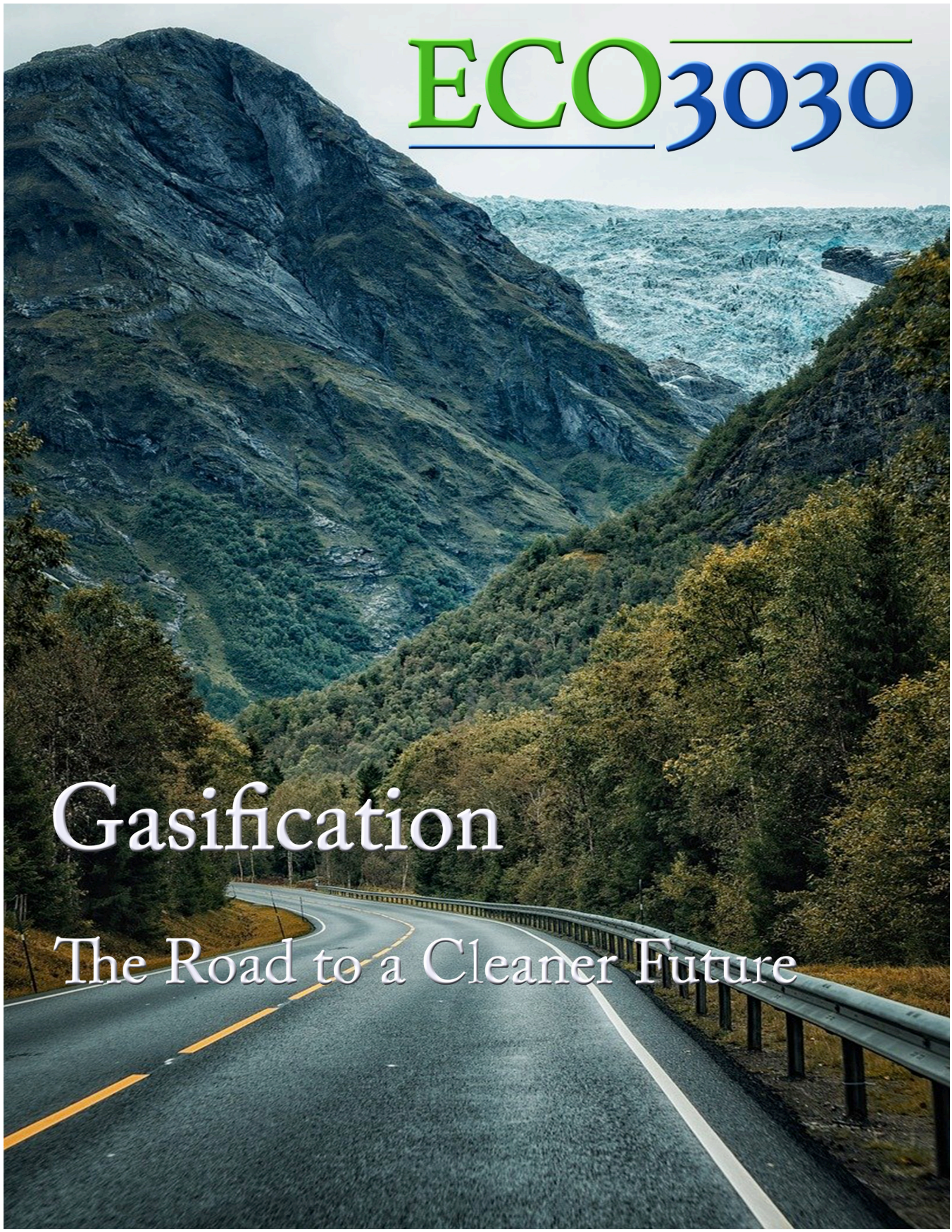
ECO3030
Gasification
The Road to a Cleaner Future

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GASIFICATION : The Road to a Cleaner Future

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Since the dawn of the Industrial Revolution in the late Nineteenth Century, mankind has continually increased its demand for electrical power. The Technology Revolution in the Twentieth Century has done nothing but *increase* the world-wide constant and overwhelming demand for power, and as a consequence, created a number of issues, both environmental and financial that we, as a society, need to address in the Twenty First Century if our global community is to continue to grow.

Traditionally, the most used configuration of power generation globally is coal burning power plants. As society has slowly awakened to the environmental impacts that burning coal for power creation has created, new forms of power generation have proliferated over the past century. These range from the simple, and environmentally unstable coal burning power plants, to nuclear power generating plants which are very efficient, but incredibly expensive to construct. Other possible forms of generating the massive amounts of electrical power the world now demands including wind, solar, hydro, and natural gas. Each of these utilizes some form of natural resource as a means to generate electricity, and each has its own unique inherent negative consequences.

There is another form of power generation known as gasification. This technology has been in a constant state of development since the 1930's, and recently has become a viable alternative to traditional means of power generation. Gasification is clean, efficient, cost effective, and offers a multitude of revenue streams to the owners of each plant. In the following pages, we will examine each form of power generation and evaluate the pros and cons of each to better understand just how the gasification process can, and will, change the manner in which society creates electric service in the future.

THE EVOLUTION OF POWER

When Edison (and Tesla) created the United States national electrical power grid around the turn of the Century, there become two accepted means in which to create power. First, burning tons of coal to heat water, which in turn creates steam, which in turn drives a steam driven turbine, which in turn creates electricity. The Second, utilizes existing

waterfalls and or dammed rivers or lakes to run water through a turbine generator, thereby creating electricity. These two forms of power generation have been with us since the creation of electricity. But as stated above, coal burning plants are extremely inefficient at converting coal to heat to steam to electricity, and hydro-electric plants are expensive and are completely dependent on permanent locations next to, or on, a running water source.

Wind energy, which has been around for thousands of years vis-a-vie the wind mill, is completely dependent upon nature. Wind farms are increasingly more expensive to build, and when one looks at a cost to revenue analysis, not one wind farm has ever produced any significant profit, rather they have generated trillions of dollars of taxpayer funded government subsidies, while contributing less than 2 percent of the usable electricity within our National power grid.

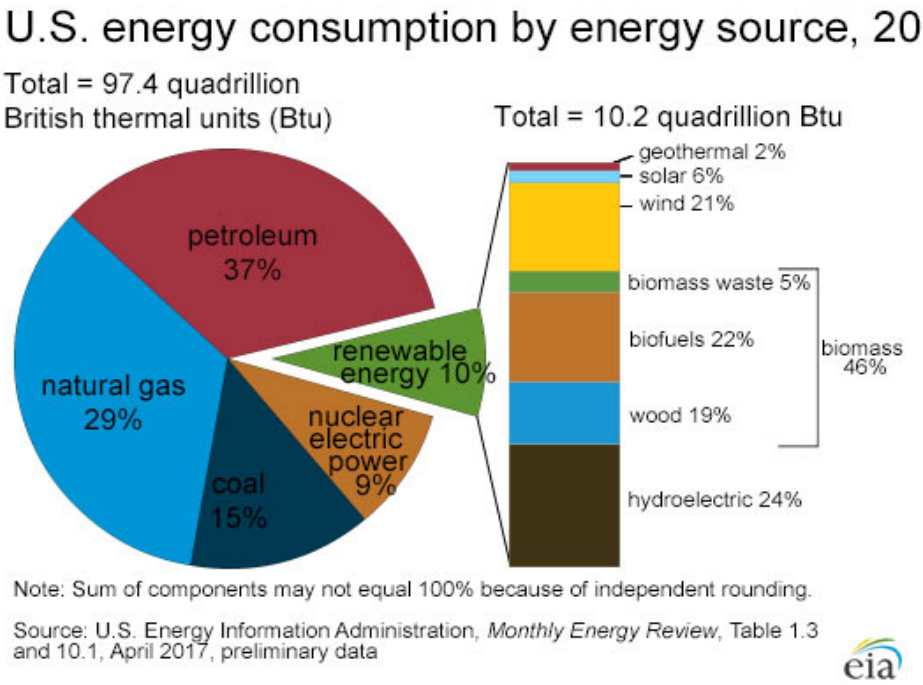
Solar energy is much the same as wind. It is completely dependent upon nature, and in most parts of the known world, there is not enough sunshine to create a viably profitable business model without trillions in government subsidies.

Nuclear power plants are the most efficient means of power generation once they are operable. The cost of construction is enormous, being ten to twenty times that of a coal burning plant, almost certainly in the tens of billions. And while they operate on a very cost efficient model, the unused nuclear materials they create present an enormous disposal problem globally.

Gasification technologies have been refined over the past 80 years to create a very attractive alternative model to these (and other) forms of power generation. The process is really quite simple. Coal, or other feedstock as we will discuss shortly, is fed into a completely sealed chamber. It is pressurized under extreme pressures and through means of plasma injection or electromagnetism reduced into its natural elemental state, creating Synthetic Natural Gas, pure Nitrogen, pure dry sulfur, and synthetic liquid petroleum. This is all accomplished without burning, and without negative environmental impact of any kind. The Syn-gas is then utilized to 1) power the entire plant and 2) drive a gas driven turbine thereby creating electricity. The remaining output resources are sold as additional revenue streams to the overall operation.

The chart on the next page shows just how the US consumption of energy is broken down by source. As you see, renewable energy accounts for a mere 10% of total consumption. The largest consumption in this chart, petroleum and natural gas, are mostly used for cars, home heating and other such uses. The majority of coal, nuclear, and renewables are utilized for generating electricity. A total of 34%, or a third of total US consumption.

Accepting that in the foreseeable future, nuclear and hydro-electric plants were to remain constant, utilizing a gasification process on the remaining consumables would result in producing totally environmentally clean energy from almost 22% of the total current US consumption. This equates to millions of gigawatts in power.



With this history in mind, Eco3030 proposes a refined version of energy creation. Gasification as a means to not only utilize the massive amount of coal reserves in America, or other countries globally, but simultaneously eliminating the need for municipal landfills.

How is this proactive feat accomplished you might ask?

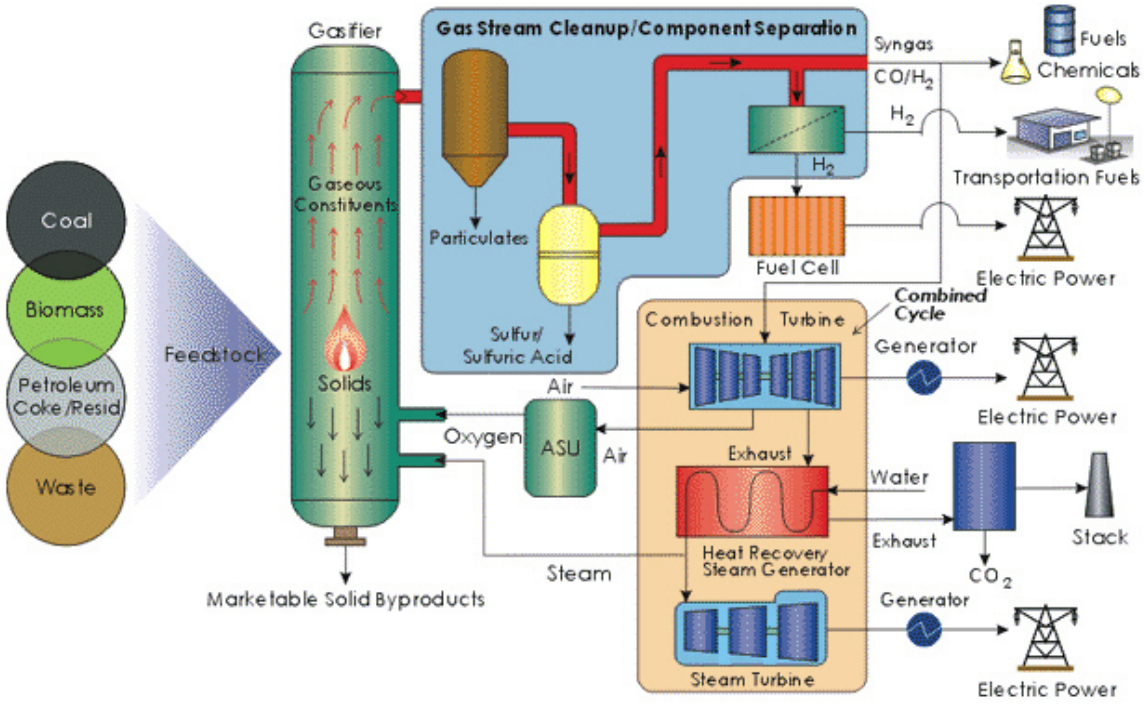
GASIFICATION AS A WASTE TO ENERGY SOLUTION

When we consider the huge economic impact of energy in the United States, we should also consider the majority of energy consumption is through transportation fuels. It is over 50% of total consumption. While gasification enables the production of pure SynGas which creates electricity, another output from the gasification process is fuel.

The United States currently holds over 27% of worldwide coal reserves. In comparison, China, which currently operates over 439 coal-burning power plants, controls 13% of the global coal reserves. These two countries hold the largest share of coal globally. In 1980, The US and China each produced about 1 Billion tons of coal annually. Exxon predicted that by 2010, synthetic fuel (one of the outputs of gasification) would reach a 75% market share of the transportation fuel market, and that no new refineries would be built in the United States. We now know this is not true.

Currently, the United States is only producing 1 Billion tons of coal yearly, while China has increased their production to over 4 Billion tons annually to feed their increasing demand for power. Simply increasing Americas coal output to match Chinas would not only validate the Exxon prediction for transportation fuels, but create the cleanest, most cost efficient system in the world. And that is just the beginning.

Gasification technology, whether plasma or electromagnetic, goes far beyond coal. As the technology has evolved, many other forms of "feedstock" can be utilized in the creation of revenue generating outputs from a single plant. To better understand gasification science, the following diagram depicts a standard gasification operation.



Modern version of the gasification process

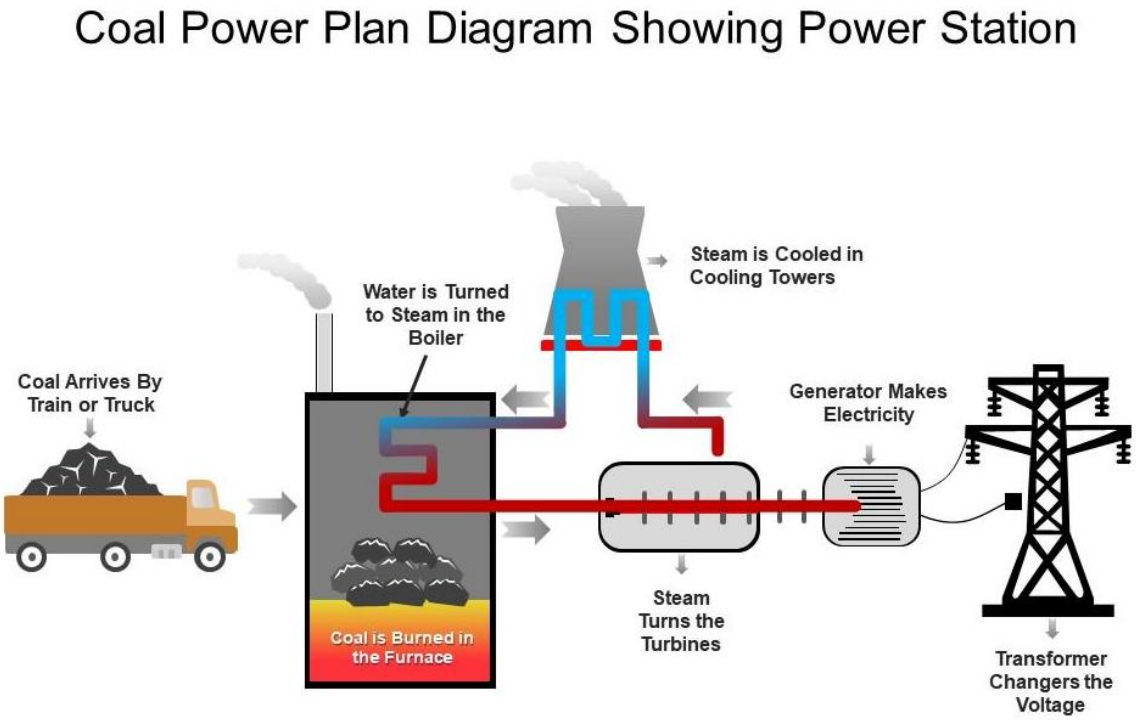
As you clearly see, coal is but ONE form of "feedstock" from which energy is created. Eco3030 posits that biomass, or Municipal Solid Waste garbage (MSW) will create nearly the same efficiencies as coal, while ***eliminating*** the need for landfills nationwide.

While MSW can be utilized as a feedstock for a Gasification facility, coal remains the most efficient form of feedstock regarding the transfer of energy within the operation.

ALTERNATE SOLUTIONS FOR EXISTING FACILITIES

When considering a gasification option to create electric power, one must consider the costs associated with this technology. The single most expensive part of a current coal-fired power plant is the steam turbine generator. This single piece can cost over 100 million USD. It is with this fact in mind, that we propose an alternative to simply scraping the thousands of existing power plants around the world, but rather, utilize the costly bits while still achieving a near total positive environmental impact.

As you are aware, a coal-fired plant is rather simple in its operation. Coal is put into an open furnace, burned to create heat. That heat is used to boil water, which in turn makes steam. The steam is directed to a turbine generator thereby creating electricity.



When considering the overall costs of a facility, if one were to eliminate the furnace, and replace it with a gasification chamber, huge savings can be realized in the construction process.

The gasification process produces huge amounts of 99% laboratory pure Synthetic Natural Gas, so pure that if burned in the open air, it is extremely difficult to measure any toxins. It is our remit that if a gasification chamber were built as a replacement to the coal furnace, the SynGas is then burned to heat water, creating steam, and thus electricity through the currently existing components. This is a far more efficient means of facility management, all while being 99% environmentally friendly. In fact, the entire system is self contained, with nothing but the cooling steam vapors returning to the environment.

One can further make the argument that burning coal to create electricity is probably one of the most inefficient means of heat conversion. It has been documented around the world that a coal-fired plants efficiency is less than 20% in terms of harnessing the potential BTU's from coal. This means that over 80% of the potential energy stored in coal is wasted. Most of that waste is the main cause in creating massive environmental issues globally.

IF that same coal were to be used as feedstock in a gasification chamber, the potential energy captured, and in turn utilized, increases to over 90% efficiency. This is a huge difference. A difference that means one could realize an equivalent output of capturing stored BTU's while using less than a third of the coal currently used. Further, the entire process is self-contained, thereby creating an almost negligible impact on our global environment.

Eco3030 stands ready to implement these ideas on a commercial level. We have partnered with one of the leading companies in the world to create alternative solutions to existing environmental and national problems. Our partners have been working in the gasification field for over 30 years, hold multiple patents world-wide, and are excited about the opportunity to create clean energy, efficiently and effectively, all while building a better world for our children.

The following pages contain a very brief introduction to our technical partner, Regulus Energy, LLC.

Eco3030 appreciates your time in reading this document. We look forward to collaborating in creating a cleaner future for all.

Thank you.

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INTRODUCTION TO REGULUS ENERGY, LLC
PROJECT EXPERIENCE

The experience, training, education and certifications of the team of engineers that comprise Regulus Energy and its consulting partners is vast. The team consists of engineers with Chemical Engineering, Mechanical Engineering, Civil Engineering, Electrical Engineering and Statistics degrees, including Bachelors and graduate degrees from accredited universities. Their combined work history totals almost 300 man-years of industrial/commercial engineering experience, with over 210 man-years experience in chemical process industries including alternative energy, plus civil construction and power generation fields. Additional certifications include PE licenses in Chemical, Civil and Structural engineering, construction trade and Project Management certifications, Reliability and Maintenance certifications, and process optimization and statistical certifications.

The Regulus team members have worked on alternative energy projects over several years that have converted biomass and waste materials into finished ASTM 4806 and ASTM 5798 ethanol, ASTM 7566 jet fuel, and ASTM D975 diesel. In addition Regulus has a strong partnership arrangement with ABB for process instrumentation & automation and electrical/power system design, and has business contacts with several Engineering/EPC and professional services firms that can be utilized if necessary to provide additional engineering personnel to any project.

The core technologies within Regulus comprise advanced steam reforming and Fischer Tropsch systems that convert virtually any carbonaceous feedstock into the liquid fuel of choice (ethanol, methanol, jet, diesel) or into electricity. A partial list of the plant operating experience utilizing Regulus' technologies and know-how is below:

Plant	Gasifier Size Tons per Day ("Bone dry" tons)	Feedstock	Output Product	Years of Continuous Operations
Dow Commercial (several units)	240	Coal	Syngas, fed to Siemens 120 MW gas turbine generators	30 +
Dow In-house	240	Coal	Syngas, fed to Westinghouse 17 MW gas turbine generator	7 +
Dow Commercial (several units)	240	Coal	Syngas to heat steam, for steam turbine generators	30 +
Brightstar Australia	60	MSW / cellulosic	Syngas to heat steam, for steam turbine	5 +

			generators	
Aberdeen, Mississippi	42	Natural gas	Methanol, 6.5 million gallons per year	1

Next is a list of commercial projects, including energy, chemical and civil projects that did NOT use Regulus technologies that Regulus personnel have engineered, procured, constructed, commissioned and operated in the last few years:

Customer	Type of Project	CAPEX - EPC $	Year
Iowa Chemical Co.	Ammonium Nitrate EPC	$2 billion	2017
Alternative Energy Co.	MSW to Jet fuel demonstration plant	$30 million	2016
Nebraska Ethanol Co.	Corn Ethanol EPC	$150 million	2015
Gulf Coast Energy Co.	Gas / NGL Fractionation Unit EPC	$150 million	2014
Several Power companies.	Gas, Coal, Waste and Nuclear to power EPC	$500 million – $1.0+ billion per project	2000 - present
New York Energy Co.	Plastics to crude hydrocarbon fuel EPC	$20 million	2013 - 2017
California Energy Co.	Gas Compression & Storage EPC	$100 million	2013
North Dakota Oil & Gas Co.	Oil Terminal project EPC	$40 million	2013
Several Midwest USA Ethanol companies	Corn Ethanol - Controls EPC	$600 million + total with several plants	2010 - 2011
New York Energy Co.	FOG Waste to crude hydrocarbon fuel EPC	$10 million	2011
New York State	Construct 5 bridges & 15 mile highway EPC	$240 Million	2010
North Dakota Oil & Gas Co.	Greenfield gas / NGL fractionation unit EPC	$100 million	2010