Economic Benefits of the HECA Project

A Major Investment in the Local Economy

Construction and operation of the Hydrogen Energy California (HECA) Project will bring thousands of high quality union jobs and major economic stimulus to Kern County and the region.

The local economy will not only benefit from the direct investment in the Project, but will also realize positive indirect and induced economic impacts. "Indirect effects" refer to economic impacts at the supply chain level. This includes output and jobs created by contractors, vendors, and manufacturers involved with the project (i.e., jobs created at the supply chain level). "Induced effects" are the change in wealth and income that result from the spending of those persons directly and indirectly employed by the project. For example, spending on food, clothing, and services by those directly and indirectly employed by the project as a result of their increase in wealth, would be considered induced effects.

Using IMPLAN, a nationally recognized economic input/output model,[1] HECA is able to forecast the economic benefits the Project will bring to Kern County during construction and operation. Some of the major highlights of the project are listed below:

- More than 2,400 jobs at the peak of construction
- 8-10 million hours of employment during the five-year construction period
- $3.4 billion in economic stimulus to Kern County during construction
    - $1.7 billion in direct, indirect and induced construction labor income
    - $1.7 billion in direct, indirect and induced economic growth related to the construction period
- 200 permanent jobs at the Project site during operations
- $291 million dollars of economic impact in Kern County over the Project's lifetime
    - $52 million in labor income per year for all direct, indirect and induced jobs
    - $239 million dollars of annual economic output in Kern County during the life of the Project

In addition to the 200 permanent and skilled jobs created for the operation of the power and manufacturing facilities and the Enhanced Oil Recovery (EOR) and rail operations, the Project will create 240 permanent indirect jobs and 190 permanent induced jobs in Kern County—***a total of 630 permanent, local jobs created by HECA operations.***

[1]The IMPLAN model is an economic input/output modeling system originally developed by the U.S. Forest Service along with the University of Minnesota. Today it is available from the Minnesota IMPLAN Group, Inc. For more information about the IMPLAN model and MIG, Inc., visit www.implan.com.

Additional Benefits to California's Economy

- HECA represents a $5 billion investment in California's infrastructure and construction industries which includes:
  - A $3.9 billion Integrated Gasification Combined Cycle (IGCC) electric power plant and fertilizer facility, and;
  - At least $1 billion in improvements to the Elk Hills Oil Field by Occidental Petroleum Corporation (Oxy)
- The Project is expected to generate approximately $77.4 million in taxable sales (7.25 percent sales tax multiplied by $1.06 billion worth of locally purchased materials) during Project construction.
  - $67.3 million of the tax revenue will go to the state of California
  - An estimated $10.1 million will be retained in Kern County
- After construction is complete, additional sales tax revenues will continue as materials are purchased during operation.
- An annual three million tons of CO_2 will be captured and utilized for EOR, generating new revenues for Kern County and the state.
  - An estimated two additional barrels of oil will be recovered for every ton of CO_2 used in the EOR process, based on engineering estimates
  - The annual increase in oil production is estimated at 6 million barrels per year or 180 million barrels over the first 30 years of the project.
  - At $80 per barrel, the market value of the recovered oil is estimated to be between $400-$500 million dollars per year, (potentially $15 billion in the first 30 years) including associated royalty/sales and use tax advantage to Kern County.
- HECA will export approximately 300 MW into the California Independent System Operator's grid, adding reliability while providing low-carbon electricity to help achieve state mandates for clean energy and displace imported power.
- HECA will locally produce one million tons per year of high quality low-carbon readily available fertilizer for California's important agriculture industry, reducing the need for imported supplies which have reflected increasing transportation costs in the price to end users.
  - Imported fertilizer has jumped in price by as much as 10 to 25% during the past decade, driven largely by the costs of transportation and supply bottlenecks.
- HECA will create products within the state of California valued at over $1 billion per year.
  - $450 million from recovered oil per year
  - $350 million from electricity per year
  - $350 million from fertilizer per year

For more information please visit our website at **www.heca.com**