7.0 ECONOMIC AND SOCIAL EFFECTS OF PLANT CONSTRUCTION AND OPERATION

The proposed Polk 2-5 Conversion Project will result in some economic and social effects. These effects will largely be beneficial. This chapter describes the socioeconomic benefits and costs associated with the construction and operation of the Project.

7.1 ECONOMIC AND SOCIAL BENEFITS

The primary benefit to the region as a result of the proposed Polk 2-5 Conversion Project will be the provision to the public of additional clean and reliable energy using primarily natural gas. Tampa Electric rate payers will benefit directly from the Project, which the need for power petition to the PSC demonstrates is the lowest-cost option for additional electric generation to meet Tampa Electric's future customer needs.

The Project will provide other benefits to Polk County and the state of Florida in terms of construction employment and revenues during construction and operation. Major positive impacts will result from increases in the local economy to support project construction and operation. The addition of jobs during construction, an increased property tax base, and the purchase of various goods and services will all provide opportunities for significant positive benefits within the local community. (Note that all monetary figures in the following are in 2012 dollars unless otherwise indicated.)

7.1.1 TAX REVENUES

The Project will create both direct and indirect tax benefits. Local revenues will be generated from property taxes levied on the new plant facilities owned by Tampa Electric. State taxes will be generated through sales taxes on all nonexempt construction materials and supplies required for the construction and operation of the plant.

Property taxes will be a primary revenue benefit for Polk County. Significant revenues are also expected to be generated through sales tax assessments on goods purchased directly for the plant or indirectly from purchase of goods and services by construction workers/employees. The estimated additional property tax revenues to Polk County are between $6 and $6.5 million once the new unit is operational. This is in addition to the approximately $4.5 million in local property taxes that Tampa Electric currently contributes to Polk County for the existing PPS.

Construction workers can be expected to purchase goods and services, particularly from local retail businesses, hotels/apartments, and restaurants. Where applicable, such sales will result in increased retail sales tax collection. Retail sales taxes will also apply to purchases of materials, supplies, and selected services required during operation. Based on Tampa Electric's estimate of $1.5 million per year for such operational purchases, the retail sales tax revenue, with a sales tax rate of 7 percent, is estimated to be approximately $105,000.

7.1.2 INDIRECT REVENUES

Indirect revenues, such as increased levels of spending in the site area by the construction workforce, will also benefit the state and local economies. The Project is expected to have a significant, positive impact on local businesses and the local economy as a whole during construction. Numerous local businesses will benefit by servicing the Project needs and the needs of its contractors and workers during construction. Purchases of a wide variety of services and supplies such as concrete, aggregate, lumber, conduit, cable, building supplies, office supplies, and tools are likely to be made locally, whenever available. Local restaurants, hotels/apartments, and retail businesses will also benefit. Additional indirect state and local revenues will be generated from the purchases previously described through corporate income taxes, as well as retail sales taxes paid by the businesses and their employees.

7.1.3 TEMPORARY AND PERMANENT NEW JOBS

7.1.3.1 Construction Employment

Additional employment during construction of the Project, even though temporary, will be a positive socioeconomic benefit to the area. As outlined in Section 5.6.2, construction is scheduled to begin in early 2014, and total construction employment will average approximately 250 workers for the overall 32-month construction period. The more labor-intensive period of construction will occur in 2015. A peak of approximately 500 workers is forecast.

Construction payroll for the overall Project will total approximately $88 million. It is likely that a majority of the construction wages will be generated for Polk County and nearby county residents. Another economic benefit from construction will be the use of local subcontractors and vendors to provide services, goods, and materials. Although included in the construction workforce estimates, use of local subcontractors and vendors will contribute to the local economy.

To analyze the wider economic benefits of the construction of the proposed Project to Polk and Hillsborough Counties, the Regional Input-Output Modeling System (RIMS II) developed by the U.S. Department of Commerce, Bureau of Economic Analysis, was used. RIMS II is widely used in both the public and private sectors to estimate regional impacts of a variety of projects. The modeling system accounts for the inter-industry relationships within a region, in this case Polk and Hillsborough Counties, because these relationships largely determine how regional economics are likely to respond to project development. The outputs of RIMS II are region-specific multipliers that can be used to estimate the total impact of a project on earnings and jobs. The direct-effect multipliers are used in this instance, since the initial change in employment and earnings are known.

Table 7.1.3 1 shows the estimates of the impacts of construction based on:

- Construction payroll: $88,000,000
- Average number of workers: 250
- Direct-effect multiplier for construction earnings: 1.8810
- Direct-effect multiplier for construction employment: 1.8872

Table 7.1.3-1. RIMS II Construction Impacts Based on Initial Changes in Earnings and Employment

Initial Change	
• Earnings	$88,000,000
• Employment	250
Direct-Effect Multiplier	
• Earnings	1.8810
• Employment	1.8872
Impact on	
• Earnings	$165,528,000
• Employment	471

Source: U.S. Department of Commerce, Bureau of Economic Analysis, 2012.

RIMS II estimates that the impact in the Polk and Hillsborough County region due to construction of the Project is an additional $77,528,000 in earnings (the difference between the initial construction earnings and the multiplier impact on construction earning) and 221 jobs (the difference between the initial construction employment and the multiplier impact of those jobs).

7.1.3.2 Operation Employment

The Project will not employ any additional employees from those currently working at PPS.

7.1.3.3 Expenditures

Based on estimates prepared by Tampa Electric, approximately $210 million of construction expenditures will occur during the Project construction period. Tampa Electric estimates that approximately $21 million will be spent in the local area, based on prior experience with the existing units at PPS. Also, based on estimates prepared by Tampa Electric, annual expenditures for materials during operation will be approximately $1.5 million. These expenditures will primarily occur locally for such items as chemicals, pumps, motors, valves, piping, equipment, and supplies. An additional approximately $1.5 million will be expended annually for local services. Local subcontractors will be required to maintain the plant, as well as to repair equipment and machinery. Vendor services for yard maintenance, mowing, waste removal, and equipment rental will be required. Mechanical, chemical, and environmental consultants will be required during operation.

7.2 ECONOMIC AND SOCIAL COSTS

Socioeconomic impacts to the area, including impacts on community services, associated with the Project construction and operation are expected to be minimal. Construction and operation of the Project will not negatively affect essential community services or facilities. Since, in all likelihood, the projected construction workforce will primarily commute from existing residences or temporary housing such as motels and apartments (with few permanent relocations anticipated), project-associated increases in spending are expected to benefit the local and regional economies, while creating minimal new demands on public services and facilities or housing. This was the experience encountered during the construction of Polk Units 1 through 5. There will be no additional employees required during the operational phase of the Project.

7.2.1 TEMPORARY EXTERNAL COSTS

The temporary external costs associated with the Project deal primarily with short-term traffic impacts during construction. Construction traffic may result in increased wear on existing roadways and cause some traffic congestion during peak hours. As shown in Section 5.7.3, the adjacent roadways are operating at an acceptable LOS and will continue to do so during construction. Even the potential for short-term congestion at arrival and departure times will be mitigated by transportation demand management techniques such as carpooling and off-peak travel.

Residential areas are expected to experience minimal impacts from the Project due to distance from the Site and adequacy of the setback of plant facilities from SR 37. Most onsite activities will not be visible to residences in the area.

As discussed in Section 5.6, noise during construction will be attenuated by distance and the buffer area that separates the construction site area from the surrounding residential communities. Given the community service infrastructure in the area and the likelihood that much of the construction workforce will come from the local area, potential impacts on facilities such as schools and hospitals are expected to be minimal during construction. The same can be said of housing resources.

Construction of the Project is expected to generate some construction debris and municipal solid waste. However, attempts will be made to minimize the amount of construction waste generated and will seek to segregate and recycle as much

waste material as possible. Certain construction wastes, such as scrap steel, aluminum, copper, lumber, paper, and cardboard, etc., will be segregated for recycling, providing there is sufficient interest from local recycling firms. Authorized and licensed waste-handling contractors will remove all other construction waste materials from the Site for proper disposal at the nearby county landfill. Given the size, capacity, and life expectancy of the county landfill, the wastes generated temporarily during construction will not adversely impact that facility.

7.2.2 LONG-TERM EXTERNAL COSTS

The socioeconomic costs resulting from the long-term operation of the new unit are expected to be minimal and localized. The following summarizes some of these potential impacts.

7.2.2.1 Land Use

The Project will be constructed on a site that has long been used for power generation. Furthermore, the surrounding area lands are primarily reclaimed phosphate mining lands in rangeland or in agricultural use. As the Project is an addition to the existing electrical generation being produced at PPS, the Project is consistent with existing land uses and land use designations.

The long-term utility use of the Site will mean that the Project will not cause a negative land use conversion in the vicinity. No residents will be displaced or risk an economic loss as a result of the proposed facilities being constructed. Existing vegetated buffers and current setback distances will minimize any potential negative impacts such as noise, dust (during construction), or glare to areas surrounding the Site. The Project's use of an existing power plant site will result in no displacement of any scenic or recreational lands or other public lands nor cause conversion of agricultural lands to nonagricultural uses. As discussed in Section 3.2.2, the construction and operation of the Project is consistent with the current land use designation and other land use regulations (the rural development area and applicable development-limitation areas).

7.2.2.2 Aesthetics

The Project is not located near any scenic viewsheds. The buffer provided by the distance of the planned plant facilities from the nearest residential properties will minimize aesthetic impacts. The tallest structures may be visible from selected offsite area vantage points, but the view will not be incongruous with the existing PPS plant facilities, and the height will be less than the tallest structures of the

existing Unit 1. Therefore, impacts to aesthetic quality of the vicinity resulting from new structures will be negligible.

7.2.2.3 Public Services/Facilities

Operation of the new CC unit will not negatively affect essential services or facilities. While it may rely on some local police and fire protection support, the existing Site is already equipped with its own fire protection and other safety-related systems, and the Site is secured with controlled, fenced access. Similarly, potable water and domestic wastewater treatment will be provided through existing onsite, private facilities. Thus, any impacts on community services will be minimal. No additional employees will be required to operate the new unit.

REFERENCES

U.S. Department of Commerce, Bureau of Economic Analysis (BEA). 2012. BEA's 2008 National Benchmark Input-Output Accounts.