

7.0 Economic and Social Effects of Plant Construction and Operation

The purpose of this chapter is to identify the direct and indirect economic and social effects of SCCF based on both short-term (construction) and long-term (operation) time periods, with an emphasis on effects not directly concerned primarily with the production of electricity. SECI estimates the total Project costs will be approximately \$727 million. Construction activities for SCCF are scheduled to begin between mid-2019 and early 2020 or after the necessary regulatory approvals are obtained, with targeted commercial operation of SCCF approximately 36 months later. This analysis assumes an operating life of 30 years for the purposes of estimating the Project life-cycle benefits.

Socioeconomic impacts of construction and operation of a project may occur when a project directly or indirectly changes economic activities, population, or infrastructure in the area. Direct effects are those that are the direct result of construction and operation of a project. Examples of direct effects include purchases of materials and/or equipment, payment of wages, impacts to public facilities, and noise. Indirect effects are those that are the result of economic changes in the vicinity of a project. An example of an indirect effect would be increased spending by construction/operation employees.

This chapter is divided into two sections. Section 7.1 addresses SCCF's economic and social benefits, while Section 7.2 addresses the Project's economic and social costs and impacts. All costs and benefits are based on 2017 dollar values.

7.1 Economic and Social Benefits

Construction and operation of SCCF will provide benefits to the economy of Putnam County and the state of Florida in terms of employment and revenue during construction and operation. Direct benefits from construction will include employment/payroll, with an average monthly employment of approximately 200 workers, as well as the purchase of equipment and materials. Approximately \$600 million of construction expenditures will occur during the Project construction period. SECI estimates approximately \$30 million will be spent in the regional area, including Putnam County and northeast Florida.

Direct operational benefits from the Project include tax revenues, employment for approximately 30 employees, and operational and maintenance expenditures. Annual expenditures for materials and services during operation are expected to be approximately \$11 million. Many of these expenditures for items such as equipment and supplies and/or local contractors and vendor services will occur regionally.

Project construction activities will require skilled labor. SECI estimates 30 to 40 percent of the peak construction wages paid by the Project will be spent within Putnam County and the surrounding region, thereby creating additional demand for goods and services. This will create a multiplier effect within the area, generating additional jobs and earnings. The wages for permanent operation employees will likewise have a multiplier effect.

The total direct and indirect economic benefit of the construction of the Project is estimated to be \$654.5 million (construction expenditures plus total direct and indirect wages). With SCCF in operation, the anticipated direct and indirect economic output is expected to average \$3.6 million annually (direct and indirect wages plus sales tax revenue), with the total direct and indirect economic output during the operational life of the Project expected to be approximately \$108 million plus property taxes.

7.1.1 Temporary and Permanent New Jobs

7.1.1.1 Construction Employment

Employment during the construction phase of SCCF will be a positive socioeconomic benefit to the area. Construction activities for SCCF are scheduled to begin between mid-2019 and early 2020 or after the necessary regulatory approvals are obtained. Total construction employment will average approximately 200 workers for the overall 33-month construction period. The most labor-intensive period of construction will occur in 2021, with a peak of approximately 500 workers anticipated for two to four months. Using an average of 200 workers for the 33-month construction period, construction payroll will total approximately \$48 million.

SECI used the Regional Input-Output Modeling System (RIMS II) developed by the Bureau of Economic Analysis (BEA) within the U.S. Department of Commerce to analyze the wider indirect economic benefits of the construction of the proposed Project to Putnam County. 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, 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 employment. The

direct-effect multipliers are used in this analysis, since the initial change in employment and earnings are known. Table 7.1.1-1 shows the estimated construction impacts. RIMS II estimates the indirect impact in the region due to construction of the Project is an additional \$6.5 million in earnings during the construction phase¹ and 36 jobs.²

Table 7.1.1-1. RIMS II Construction Impacts Based on Initial Changes in Earnings and Employment

Initial change	
• Construction payroll/earnings	\$48,000,000
• Average employment	200
Direct-effect multiplier	
• Earnings	1.1355
• Employment	1.1833
Impact on	
• Earnings	\$54,500,000
• Average employment	236

Source: U.S. Department of Commerce BEA, 2016.

7.1.1.2 Operation Employment

The Project will employ approximately 30 employees at operation with an approximate payroll of \$2.4 million annually. Similar to construction impacts, the RIMS II multipliers can be used to estimate the regional indirect economic effect of operation of the plant. Table 7.1.1-2 shows the estimated operation impacts. RIMS II estimates the indirect economic impact in the region due to operation of the Project is an additional approximately \$1.0 million in earnings annually³ and 37 jobs.⁴

¹ Difference between initial construction earnings and the multiplier impact on construction earnings (\$48 million × 1.1355 = \$54.5 million).

² Difference between initial construction average monthly employment and the multiplier impact of those jobs (200 jobs × 1.1833 = 236).

³ Difference between the payroll earnings and multiplier impact on earnings (\$2.4 million × 1.4215 = \$3,411,600).

⁴ Difference between the operation employment and multiplier impact of those jobs (30 jobs × 2.2321 = 67).

Table 7.1.1-2. RIMS II Operation Impacts Based on Initial Changes in Earnings and Employment

Initial change	
• Operation payroll/earnings	\$2,400,000
• Employment	30
Direct-effect multiplier	
• Earnings	1.4215
• Employment	2.2321
Impact on	
• Earnings	\$3,411,600
• Employment	67

Source: U.S. Department of Commerce BEA, 2016.

7.1.2 Tax Revenues

SCCF will create both direct and indirect tax benefits. Local revenues will be generated from property taxes levied directly on the new plant facilities owned by SECI. 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 Putnam County. Assuming the 2017 Putnam County millage rates, the estimated property tax payment for SCCF in the first full year of operation will be up to approximately \$9.0 million. These taxes include the county general fund, school board, fire district, and water management district taxes.

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 and operation workers/employees. Based on SECI's current estimates, the annual state and local sales tax revenue on goods purchased directly for plant operation is estimated to be approximately \$191,000. Indirect purchases of goods and services by employees will result in additional, increased retail sales tax collection as well.

7.1.3 Indirect Revenues

Indirect revenues, such as increased levels of spending in the area by the construction and operation workforce, will also benefit the state and local economies. SCCF is expected to have a positive impact on local businesses and the local economy during construction and operation. Local businesses will benefit by servicing SCCF needs and the needs of its contractors and workers. 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. Motels, apartment complexes, other transient living facilities, such as mobile homes and trailer parks, restaurants, and retail businesses, will also benefit, particularly during construction. 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.

7.1.4 Overall Economic Benefits

SCCF will provide economic benefits to Putnam County and the surrounding area. During construction, the average direct and indirect wages will be approximately \$19.82 million annually, with a total economic benefit of \$654.5 million. During operation, the average annual direct and indirect wages are estimated to be approximately \$3.41 million. The direct and indirect benefits from operations are expected to be approximately \$108 million over the life of the Project, plus property tax payments.

7.2 Economic and Social Costs

Socioeconomic impacts to the area, including impacts on community services, associated with SCCF construction and operation are expected to be minimal. The projected construction workforce is anticipated to primarily commute from existing residences or temporary housing such as motels, recreational vehicle (RV) parks, and apartments (with few permanent relocations anticipated). In addition, project-associated increases in spending are expected to benefit the local and regional economies, while not creating new demands on public services/facilities or housing. Likewise, the approximately 30 SCCF operation employees will not adversely impact public services/facilities or housing.

7.2.1 Temporary External Costs

Up to approximately 380 workers will temporarily migrate into Putnam County and the surrounding area to support construction of the Project during the two- to four-month peak construction period. The population increases from in-migrating workers represents a small percentage (approximately 0.6 percent) of the Putnam County projected population during the construction peak (BEBR, online). Therefore, SCCF construction is not expected to have an adverse population impact to Putnam County and the surrounding area.

Labor demands associated with the construction and operation of the Project are not anticipated to create any labor shortages, because there is a substantial construction industry in Putnam County and nearby counties (BEBR, online; U.S. Census), and because many workers will migrate to the Project site due to

the specialized nature of the work. Given the existing infrastructure in the area and the availability of hotels, motels, vacant housing, apartments, and other transient housing opportunities, potential impacts on facilities are expected to be minimal during construction. Putnam County and the surrounding region have the resources to absorb temporary impacts from workers and has the housing resources for temporary workers.

The primarily temporary external impacts associated with the Project are short-term increases in traffic generation during construction, including that of construction workers and trucks delivering equipment and materials to the site. Construction traffic may result in increased wear on existing roadways. As shown in Section 5.7.3, the adjacent roadway links are operating at an acceptable LOS and will continue to do so during the construction period.

SCCF construction will not significantly impact existing residential or commercial development or recreational values. The site has been in active use for electrical generation for more than 30 years. The nearest permanent private residence to the portion of the SGS property on which SCCF is proposed to be located is approximately 2,000'. The closest areas of commercial development are approximately 1.5 miles from the site. The views of construction activities will blend in with the industrial nature of the existing SGS facilities. Noise during construction will be attenuated by distance and the buffer area that separates the site from the nearest residential communities.

Construction of the Project is expected to generate some construction debris and municipal solid waste. Attempts will be made to minimize the amount of construction waste generated. The construction team 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 Putnam County Central Landfill or another appropriately licensed waste disposal facility. Given the size, capacity, and life expectancy of the County landfill, the wastes generated temporarily during construction will not adversely impact that facility (Putnam County, 2016).

Although the local community may experience some temporary impacts during the SCCF construction period, the overall socioeconomic impacts associated with the construction and operation of the Project will be favorable.

7.2.2 Long-Term External Costs

7.2.2.1 Land Use

SCCF is compatible with the existing electrical generating facilities that have been in operation on the SGS site for more than 30 years. When complete, the Project will be surrounded by existing SGS facilities and wooded land. The new electrical generation will be at least 2,000' from the nearest residence. The Project will utilize existing power plant infrastructure, including the existing electrical transmission line corridor and tie-ins to existing water pipelines, thereby minimizing land use impacts. SCCF is a logical expansion given the adjacent existing SECI facilities.

7.2.2.2 Aesthetics and Noise

Due to the location of SCCF on a site that has been used for electrical generation for more than 30 years and the distance from the SECI property boundary, SCCF operation is not anticipated to cause adverse impacts to recreational uses; deterioration of aesthetic or scenic values; or restrictions on access to scenic, historic, cultural, natural, or archaeological resources. The Project is not located near any scenic viewsheds. The stacks and cooling tower associated with SCCF will be substantially shorter than existing SGS facilities. Although not applicable, noise levels generated by the Project will be lower than the Putnam County maximum permissible sound levels for amplified sound.

7.2.2.3 Public Services/Facilities

SCCF operation will not have long-term, negative effects on local services or facilities (e.g., schools, police, transportation). While SCCF will rely on local police and fire protection, the Project will be equipped with its own fire protection and other safety-related systems, and the site will continue to be secured with controlled, fenced access. As with existing SGS generation, potable water and sanitary sewer services for SCCF will be provided on-site, since SCCF is not located in the Putnam County existing service area. Trips generated by operation of the Project will result in minimal transportation impacts to the local roadways and will not degrade the LOS of US 17 or CR 209 (see traffic impact analysis in Appendix 10.9). Solid waste generated during operation will be disposed at the Putnam County Central Landfill, which has adequate capacity. Ad valorem taxes paid to Putnam County, public facilities, service, or infrastructure will outweigh any costs associated with SCCF operation.

References

U.S. Department of Commerce, Bureau of Economic Analysis (BEA). 2016. BEA's 2010 National Benchmark Input-Output Accounts.