Should the Federal Government Sell TVA?

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Given TVA’s debt constraints and the impact to the Federal deficit of its increasing capital expenditures, the Administration intends to undertake a strategic review of options for addressing TVA’s financial situation, including the possible divestiture of TVA, in part or as a whole.

*Budget of the United States Government, Fiscal Year 2014, p. 51
http://www.whitehouse.gov/omb/budget/Overview*

On April 10, 2013, President Barack Obama released his proposed FY 2014 budget. In the budget’s chapter on “Creating a 21st Century Government,” under the heading “Reform TVA,” there is a one-paragraph discussion of the Tennessee Valley Authority. It concludes with the statement quoted above.

A number of divestiture scenarios are possible. For example: (1) TVA could be acquired by a single investor-owned utility (IOU). This scenario is unlikely, especially if the IOU operates in the Southeast, because the Federal Energy Regulatory Commission (FERC) probably would object to its stifling effects on wholesale electricity competition. (2) TVA could be divided up among IOUs in the Southeast. This is more likely to be acceptable to FERC. (3) TVA could remain a wholly-owned federal corporation, but some of its assets could be sold to IOUs and/or independent power producers. This is also a plausible scenario. If pursued, the main issue would be which assets and with what effect on what remained of TVA.

The possibilities are numerous, and it is premature to speculate about the outcome of the Obama administration’s review. Therefore, this policy brief mainly summarizes factors that should be taken into account in that review. The brief begins with background information. It ends with a list of key points relevant to the prospective decision about TVA.

**Background**

**TVA Then and Now**

Established by Congress in 1933, the Tennessee Valley Authority has a mandate to control floods, improve navigability, provide electricity, and encourage economic development in the Tennessee Valley
region. TVA’s power service territory covers 80,000 square miles: it includes most of Tennessee and parts of Alabama, Georgia, Kentucky, Mississippi, North Carolina, and Virginia.

TVA’s power service territory is limited by a provision in the TVA Act known as the “fence.” It can’t extend service outside the fence. However, TVA is the sole electricity provider for most of its territory and is generally protected from competition by an “anti-cherrypicking” provision under which it cannot be forced to provide transmission line access to companies seeking to deliver power to customers in TVA’s service area.

TVA currently sells electricity to 155 local power distributors, who in turn sell power to more than 9 million people in the region. TVA also sells power directly to about 60 industries and federal facilities (http://www.tva.com/abouttva/history.htm). In 2012, TVA’s electricity sales generated $11.1 billion in revenue—virtually all of TVA’s revenue. This revenue pays for its power and non-power programs.

TVA’s power system initially relied on its hydroelectric dams, but soaring demand soon led to the construction of coal-fired plants and nuclear power plants. As of 2010 its firm capacity came mainly from coal (40%), natural gas (25%), nuclear (19%), and hydro (12%) (percentages derived from TVA, Integrated Resource Plan, March 2011).

TVA is a wholly-owned federal corporation, and initially it depended on congressional appropriations. This practice was discontinued for TVA’s power program in 1959, and by 1999 appropriations for its environmental stewardship and economic development programs had been phased out. Now fully self-financed, TVA funds its operations primarily through electricity sales and financing arrangements such as lease arrangements and, more significantly, the sale of debt securities. As a wholly-owned federal corporation, TVA may not issue equity securities.

There are four other federal power marketing administrations: the Bonneville Power Administration, the Western Area Power Administration, the Southwestern Power Administration, and the Southeastern Power Administration. They mainly get their electricity from federal hydroelectric projects and, unlike TVA, are under the management of the U.S. Department of Energy.

Other Types of Electric Utilities and Power Producers

Publicly-owned utilities (municipal utilities, membership cooperatives, and public utility districts) account for about 15 percent of nation’s power generation. While nearly 3,000 in number, publicly-owned utilities are minor players compared with investor-owned utilities. Although there are fewer than 200 IOUs in the U.S., they account for about 40 percent of the nation’s power generation and 60 percent of its power sales. Two of the nation’s largest IOUs—Duke Energy and Southern Company—are in the Southeast.

Investor-owned utilities and other utilities such as TVA augment their own power with power purchased from non-utility generators, also called independent power producers (IPPs). Rare 30 years ago, independent power production has expanded dramatically and now accounts for nearly 40 percent of electricity generation in the US. (Data on U.S. power generation and sales derived from American Public Power Association, 2012-2013 Annual Directory & Statistical Report http://www.publicpower.org/files/PDFs/USElectricUtilityIndustryStatistics.pdf)
Eight Factors Affecting Whether to Sell TVA

(1) Corporate Governance: TVA and IOUs

According to its 1933 act, TVA was to be governed by a full-time three-member board appointed by the U.S. President with the advice and consent of the U.S. Senate. A 2005 act changed that structure to a board with nine part-time members, at least seven of whom must be legal residents of TVA’s service territory. The board members are still appointed by the President and confirmed by the Senate. This act also established the position of Chief Executive Officer for TVA. The CEO is appointed by the TVA board and may not be a board member.

Investor-owned utilities are governed by boards of directors whose members are elected by the IOU’s shareholders. Typically, an IOU is headed by a President and CEO appointed by its board of directors. The President and CEO also may serve on the board: for example, Southern Company’s current President and CEO is chairman of its board, as is Duke Energy’s.

- Having TVA’s board members appointed by the President and confirmed by the Senate isn’t ideal. The process can be extremely protracted, and the federal government’s ideas about who should run TVA may not be best for the utility and its service area. Would an IOU’s governance structure be better? Perhaps, but that structure would be shareholder-driven; it would be less likely to care about the region being served.

(2) External Regulation of Rates and Other Utility Decisions: TVA and IOUs

While TVA must comply with many federal and state regulations, decisions about its rates, new generation facilities, etc. are made by its governing board. The 1933 TVA Act specified the objective of selling power at rates “as low as are feasible.” Although higher than they used to be, TVA’s rates are comparable to those of IOUs in the Southeast.

IOUs typically must answer to state commissions, often called “public utility commissions” (PUCs), which have the authority to review and approve a utility’s rates and integrated resource plans. In addition, before constructing a new electricity generation facility, an IOU typically must obtain PUC certification that the facility is in the public interest. Not all states follow this regulatory approach: spurred by federal actions that facilitated power production competition, some states chose to pursue deregulation, also called “restructuring.” As of 2010, 15 states had adopted some form of electricity restructuring. Most of these states are in the Northeast; none are in the Southeast (Energy Information Administration, September 2010, Status of Electricity Restructuring by State http://www.eia.gov/cneaf/electricity/page/restructuring/restructure_elect.html).

All IOUs, restructured or not, are subject to regulation by FERC. The Federal Energy Regulatory Commission’s responsibilities include regulating the transmission and wholesale sales of electricity in interstate commerce. FERC also reviews some mergers, acquisitions, and corporate transactions by IOUs. FERC has some oversight over TVA, but to a lesser extent than IOUs.

- If TVA was privatized, what would the state of Tennessee do? Would it choose a “restructured” approach with minimal regulations, or would it adopt the traditional approach to electric utility regulation used by other states in the Southeast? The Tennessee Regulatory Authority (TRA) has
never regulated a large electric utility. If Tennessee chose to emulate its counterparts in the Southeast, TRA’s “learning curve” would be steep. In the long run the region might benefit from greater regulatory oversight of the utility, but not in the short run.

(3) The TVA Power System and its Components

The TVA power system includes (1) a power production system, and (2) a power transmission system.

The TVA power production system includes three nuclear power plants and 19 coal- or gas-fired power plants. It also includes a hydroelectric system consisting of 49 reservoirs, 29 conventional hydroelectric dams, and one pumped storage facility. The majority of these power system components are located in Tennessee; the remainder are in the six other states partly served by TVA.1 TVA’s power production system also includes a minor amount of renewable energy (e.g., a wind farm and a few solar installations).

TVA supplements its generated power with purchased power, renewable and otherwise. In FY 2012, 15 percent of its power was purchased (TVA, Form 10-K (Annual Report) for FY 2012 http://files.shareholder.com/downloads/TVC/2448800387x0xS1376986-12-43/1376986/filing.pdf).

TVA’s power transmission system includes 15,900 miles of high-voltage line with 102,200 transmission line structures and 260,000 acres of right-of-way. It also includes 487 power stations and switchyards. The system transmits electricity generated or purchased by TVA to local power distributors and directly-served industries and federal facilities. It also can be used by other qualified power providers on an as-available basis.

➢ TVA’s power system is just that: a system. It requires a dynamic balancing of base-load, intermediate-load, and peak-load electricity generation. If parts of TVA were divested, could the system still operate effectively? Yes, but only if the divested parts were no longer essential: for example, coal-fired plants that were about to be retired. If key assets were sold, the system’s functionality would be impaired. In that event TVA could purchase more power, but its vulnerability to price volatility would increase.

4) Power-related Functions of TVA

TVA’s power supply system is complemented by measures to curb growth in electricity demand, especially during the seasons and times of day (e.g., hot summer afternoons) when demand is highest. These measures help contain power generation costs, including the cost of building new power plants.

Two sets of TVA programs – energy efficiency (EE) and demand response (DR) – address the goal of curbing demand, especially peak demand. TVA’s EE programs include programs for residential, commercial, and industrial users. Its DR programs formerly were targeted to large industrial users but are beginning to reach out to other customers as well, using smart grid technologies. At present, the cost of these EE and DR programs is low compared with their benefits in terms of avoided electricity generation. For example, as of the end of 2012, the average lifetime costs for TVA’s energy efficiency

1 For a map of TVA’s power production system, see http://www.tva.gov/sites/sites_ie.htm
programs were $.02 per kWh (TVA Energyright® Solutions Highlights Report 2012 http://www.energyright.com/pdf/highlights_2012.pdf).

➢ TVA’s EE and DR programs are becoming a key component of its electricity supply system. Electricity sales pay for these programs, and they in turn help to keep rates low and stable. If TVA was broken up, this synergy might continue. But would those hardest to reach – e.g., mobile home owners or low-income renters – receive utility-sponsored EE?

(5) TVA’s Long-term Power System Planning

TVA periodically conducts formal long-term power system planning. In 2011, its most recent Integrated Resource Plan was completed and accepted by the TVA board. This plan, which had been in the works for two years, recommended a mix of electricity generation sources complemented by increased EE and DR (http://www.tva.com/environment/reports/irp/). The plan was developed with the input of the general public and a 15-member Stakeholder Review Group.

➢ Those who do long-term power system planning must grapple with many uncertainties – for example, uncertainties about future demand, new regulations, and swings in the price of fuels such as natural gas. If they also must contend with uncertainties about whether parts of their power system will be sold off, long-term planning becomes virtually impossible.

(6) Non-power Functions of TVA

TVA’s mandate created a number of non-power responsibilities: notably, land and river management, associated recreational facilities, and environmental stewardship (e.g., river monitoring). Many of these responsibilities arise from TVA’s system of dams and reservoirs. TVA manages about 650,000 surface acres of reservoir water, 293,000 acres of reservoir land, and 11,000 miles of reservoir shoreline. It also manages about 80 public recreation areas on TVA land (e.g., boat ramps, day-use areas, and campgrounds).

➢ The cost of TVA’s land and river management and other non-power responsibilities is covered by its electricity sales. The shoreline is valuable but the dams and reservoirs are old. Who would become responsible for their management and upkeep? In addition, private investments in water-based recreation and retirement communities have been made on the assumption that TVA’s land and river management would continue. Working in support of economic development has been one of TVA’s missions. Would that mission be assumed by its successor(s)?

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(7) TVA’s Debt

The debt ceiling of TVA was set at $30 billion by Congress in 1979 and has remained unchanged. The debt ceiling means that TVA can issue bonds in a total amount capped at $30 billion outstanding. As of the end of September 2012, TVA had approximately $24.1 billion in outstanding bonds (TVA, Form 10-K (Annual Report) for FY 2012 http://files.shareholder.com/downloads/TVC/2448800387x0xS1376986-12-43/1376986/filing.pdf). The TVA bonds are not obligations of the United States.

As noted in President Obama’s proposed budget for FY 2014, TVA’s debt counts as part of the federal deficit. As directed in Section 15d (f) of the TVA Act, however, the revenue from TVA’s power production must cover all of its costs, including its debt service on outstanding bonds and notes and its payments to the U.S. Treasury in repayment of and as a return on the government’s appropriation investment in TVA’s power facilities (called the “Power Program Appropriation Investment”). According to TVA’s most recent budget proposal to Congress, by the end of September 2013 TVA expects to have returned a total of approximately $3.7 billion, including interest, on the government’s original $1.4 billion appropriated investments in the power program. (TVA, Budget Proposal and Management Agenda For the Fiscal Year Ending September 30, 2013 http://www.tva.com/abouttva/pdf/budget_proposal_2013.pdf).

- A few decades ago TVA’s debt was cause for consternation, but today it is not a major problem. Other electric utilities also have large debts. Instead, the major problem is that (1) TVA’s debt counts on paper as part of the federal deficit; and (2) the U.S. Congress controls TVA’s debt ceiling. Should this mutually disadvantageous arrangement be changed? Probably. The question is how.

(8) Ownership and Value of TVA’s Assets

TVA owns personal property but not real property (i.e., land, structures, equipment, etc.). It acquires real property in the name of the United States. While TVA has broad authority to dispose of its personal property, it has only limited authority to dispose of the real property it manages.

As of the end of September 2012, TVA’s total assets were listed as worth about $47 billion, of which property, plant, and equipment accounted for $30 billion, net of accumulated depreciation (TVA, Form 10-K (Annual Report) for FY 2012 http://files.shareholder.com/downloads/TVC/2448800387x0xS1376986-12-43/1376986/filing.pdf).

- For more than 50 years TVA has relied electricity sales, not federal appropriations, to maintain and improve its fleet of electricity generating units. While this property is owned by the federal government, much of it has been paid for by ratepayers in TVA’s service area. If the federal government decides to keep TVA but sell some of its assets, who should get the proceeds of these sales – TVA or the federal government? Alternatively, if the federal government decides to sell TVA as a whole, who should benefit financially from this sale?

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3 Inflation-adjusted, $30 billion in 1979 would be about $96 billion in 2013.
4 For example, Duke Energy’s long-term debt was $39.5 billion as of 12/31/2012 (http://www.duke-energy.com/docs/Long-Term-Debt-Summary.pdf).
Conclusion

Key points relevant to the federal government’s prospective decision include the following:

- TVA has not received federal money for its power program since 1959; for its other programs since 1999.
- TVA has returned to the federal government more than $3 billion on the government’s original $1.4 billion appropriated investment in TVA’s power program.
- TVA’s debt counts as part of the federal deficit, but its bonds are not obligations of the United States.
- TVA’s debt ceiling was set at $30 billion by Congress in 1979 and has remained unchanged. As of the end of FY 2012, TVA’s debt was about $24 billion. All of its debt is serviced by its revenue.
- Electricity sales – $11.1 billion in FY 2012 – account for virtually all of TVA’s revenue. This revenue pays for its power, power-related, and non-power programs.
- TVA’s power program is complemented by its energy efficiency and demand response programs, which save its ratepayers money by lowering the total cost of meeting electricity demand.
- TVA’s non-power programs are necessary to meet its extensive responsibilities for river, reservoir, and shoreline management in the TVA region.
- TVA’s assets were listed as worth about $47 billion at the end of FY 2012. It is uncertain what their market price would be. These assets are owned by the United States; however, they have been paid for in large part by ratepayers in TVA’s service area.
- TVA’s non-monetary assets include its staff, its programs, and its institutional relationships with those who purchase its power.
- TVA’s governance structure is rooted in the region it serves, and it is required by the TVA Act keep its rates as low as is feasible.
- Large-scale investments in new electricity generation entail long time frames. Significant changes to TVA’s assets or its basic structure would require significant changes in long-term planning.

These issues – and undoubtedly others – need to be thoroughly considered before reaching a decision to divest TVA, in part or as a whole. The decision is partly economic, but it is more than that. It has huge implications for the Tennessee Valley region.