

Frequently Asked Questions – Idaho Falls Power North 161 kV Transmission Project

1. How did you arrive at the preferred route that was presented at the public meetings on February 16, 17, 2010?

- a. The *need* for the North 161 kV transmission project was identified in the Transmission Planning Study conducted by CH2M Hill in 1973. That study was updated by Mooney Consulting LLC in 2007. This study update concluded that the existing 44 kV loop is at or near its capacity of approximately 140 MW. Projected growth north of the city and the limitations of the 44 loop require the North Loop to be constructed as soon as possible to connect Westside Substation with Sugarmill Substation. It also recommended that in the process of planning and constructing the North Loop, that Idaho Falls Power acquire a minimum of 4 substations along the route and construct one 25MVA substation immediately.
- b. Idaho Falls Power began in earnest in May 2009 to study the potential routes/alignments for the North Loop. Meetings or discussions were held with local, state, and federal agencies to communicate and coordinate project planning and to establish permitting and regulatory protocol, including:
 - i. Rocky Mountain Power / PacifiCorp
 - ii. Bonneville Power
 - iii. Bonneville County Commissioners
 - iv. Bonneville County P&Z
 - v. Bonneville County Road and Bridge
 - vi. Idaho Falls City Council
 - vii. Idaho Falls City P&Z
 - viii. Idaho Falls City Public Works and Engineering
 - ix. New Sweden Irrigation District
 - x. Progressive Irrigation District
 - xi. Idaho Irrigation District
 - xii. Cambridge Development / Kevin Alcott
 - xiii. UPRR
 - xiv. EIRR/WATCO Companies
 - xv. US Army Corps of Engineers
 - xvi. Idaho Falls Airport / Federal Aviation Administration
 - xvii. US Fish and Wildlife Service (USFWS)
 - xviii. Idaho Fish and Game
 - xix. Bureau of Land Management (BLM)
 - xx. US Department of Lands
 - xxi. City of Ammon
 - xxii. Bureau of Reclamation
 - xxiii. US Department of Energy (DOE)
 - xxiv. Federal Energy Regulatory Commission (FERC)

- xxv. State Historic Preservation Office
- xxvi. Idaho Department of Water Resources
- xxvii. FEMA
- c. The first public meeting was held at the CAES facility in Idaho Falls in June 2009. Approximately 2000 postcard notifications were mailed to property owners within the project area. At that meeting, the public was provided information about the need for the project, as well as some of the constraints that must be addressed, including proximity to the airport and environmental concerns. There were large maps available for the attendees to draw preferred routes, identify areas of concern, and make notes for consideration by the project team.
- d. Participants in the first project open house along with visitors to the project website were surveyed to identify local values for siting transmission lines. Based on feedback received at the first public meeting, coupled with input from the agency meetings listed above, the project team developed several potential alignments and identified at least 3 potential areas for substation location. No viable routing option would be eliminated until a final route is designated. In addition to potential new substation sites, the project team investigated use of existing City assets. One of those substation locations was on a 12-acre parcel that is encumbered by IFP's FERC license at the Upper Facility.
- e. Preliminary analyses such as a windshield environmental survey were conducted in the project area to identify potential areas of concern – wetlands, historic sites, sensitive habitat, etc. Based on the following priorities established by Bonneville County; 1) Follow transportation corridors, 2) Pursue joint use of facilities in corridors with existing overhead utility. Therefore, the project team assembled a geodatabase to map existing road right-of-ways, long range transportation plans, as well as existing Rocky Mountain Power/Pacificorp and Idaho Falls Power facilities for comparative analysis.
- f. Discussions continued with the agencies listed above, as well as individual property owners and interest groups – such as irrigators.
- g. A second public meeting was held in September 2009 (the same mailing list was used to notify 2,000 area residents of the next meeting) to present a set of alternatives to the public for feedback. Nine preliminary alternatives were shown on maps and the public was invited to review and select from the nine presented, propose various combinations of segments or propose new routing alternatives not presented. A matrix was developed as a tool to assist in comparative analysis of the nine preliminary alternatives based on evaluation criteria/concerns we heard from the public, various agencies, as well as data summaries in four principle categories (Land use, aesthetics, ecology, and cultural resource. The nine alternatives were not intended to be a complete list of all alternatives, and no segments within the study area had been eliminated. The routes were presented in order to continue the dialog with the public and agencies on the potential routes.

- h. With feedback from the second public meeting, the project team gathered further data and conducted meetings with local agencies. When tasked to develop a preferred alignment, the project team assimilated all available data, and took the following approach:
 - i. On the west side of the project area, based on the county's direction for us to use transportation corridors, the public's feedback to minimize impacts to residences, and New Sweden Irrigation district's desire to keep the project off irrigation corridors, we determined that W 35th Street was the most practical route heading north out of Westside substation. In order to minimize impacts to residential and pivot irrigation agricultural operation, the poles would be positioned mostly in public ROW, rather than taking a position that would account for the future functional classification of the roadways. Because the immediate potential substation location is at the Upper Project, on the east side of the river, the logical route headed east on W. 65th Street (Eames Rd) to the River.
 - ii. On the east side, we heard from the public (stay off Hitt Road) and confirmed with the Progressive Irrigation District that they preferred that the transmission line follow irrigation corridors, which led us to select the half section line Cook/Koster lateral leading north on the east side of the project area. We then headed west on the Ririe Outlet (owned and managed by the Bureau of Reclamation). This was a suggestion we heard from the public as an alternative to staying in the ROW on 65th and 81st North and investigated it with Reclamation.
 - iii. The team was now left with how to connect the Ririe Outlet on the East side of the River to the substation location on the FERC property at the Upper Plant. This led us to East River Road as the north-south route to connect the east and west preferred alignments. This alignment would result in only one river crossing, at a point where the river is currently encumbered with Idaho Falls Power assets.

2. Are future phases of the North Loop anticipated?

There are no future phases of the North Loop anticipated. The current project to connect Westside Substation to Sugarmill Substation is the only transmission project planned.

3. What are electromagnetic fields (EMF's) and how will they impact me?

A handout is available concerning EMF's. Electromagnetic fields are a topic that has been heavily studied by third party organizations (World Health Organization). Much has been learned about EMFs over the past few decades. Studies support inconclusive results – a link between cancer and EMF *remains unproven*. The reality is that EMF exposure is higher from in household appliances than exposure from transmission lines. At a distance of 2 feet, typical magnetic field levels of household appliances are:

- a. Hair dryer = 10 mG
- b. Electric can opener = 30 mG
- c. Microwave = 30 mG
- d. Refrigerator = 30 mG
- e. Vacuum = 50 mG

EMF levels are usually the highest directly under electric lines and decrease rapidly with distance to the sides of the line. Electric fields from power lines are relatively stable because the voltage does not change. Magnetic fields fluctuate as current changes in response to increasing and decreasing loads.

Idaho Falls Power recently measured the EMF present directly underneath and in the vicinity of the existing 161kV transmission line in Idaho Falls. The following measurements were taken:

Location	Distance from Line	Measurement (mG)
161 kV York Road	Directly under	8.5 mG
161 kV York Road	Opposite side of road (60 ft)	2.5 mG
161 kV York and Sandy Downs	Directly under (angle pole)	6.2 mG
161 kV Sand Creek GC	Directly under (angle pole)	6.2 mG
161 kV Sand Creek GC	Directly under (symmetric design)	3.0 mG

4. What types of permits are required for the project?

If wetlands are impacted, a 404 permit will be required from the Corps of Engineers. No other environmental permits are anticipated.

5. Why haven't you completed an EIS for the project?

To date, the project is a local action and involves local funding. The NEPA process is for federal actions. If federal funding becomes available and used, then the project would follow the NEPA process that would be lead by a federal agency. Nonetheless, environmental issues are important to IFP and we are seeking input from the public and coordinating with state and federal resource agencies on environmental issues. We have incorporated environmental issues into the evaluation process and will continue to assess mitigation measures to minimize impact.

6. Is Smart Grid funding being used to fund the project?

The City has applied for Smart Grid funding and is a partner in the regional Smart Grid demonstration grant project. However, schedules and contracts are still being negotiated. At this time, it has not been determined that the schedule of this project can accommodate the grant project schedule and a contract has not been signed. If it is determined that the project can continue in line with the grant funding schedule and a contract is negotiated, the funding entity will conduct the NEPA review with a third party.

7. Will this new transmission line create stray voltage?

Stray voltage can occur when a system is not in balance (ie, a transformer fails, etc.). It is predominately a condition that exists due to *distribution* or secondary wiring (service to the home or business) or wiring internal to the home or business systems. Stray voltage is not generally a condition that occurs as a result of transmission lines. The City is proposing to adopt

stray voltage response rules as developed by the Idaho Public Utilities Commission to respond to concerns related to stray voltage (Title 61 Public Utility Regulation, Chapter 8 Stray Current and Voltage Remediation Act). There is no avoidance criteria established in siting due to stray voltage.

8. Will the power line negatively impact the value of my property?

The City will retain an independent appraiser to assess property impact as part of the cost to cure assessment in the easement acquisition process. The appraiser will consider a variety of impacts in the evaluation. This assessment will be based upon a legally valid defined process. Location of a power line does not necessarily negatively impact property values.

9. Will FHA make a loan to a property with a high powered transmission line located adjacent to it?

According to Chapter 1 – Appraisal and Property Requirements, “A property must be free of those foreseeable hazards and adverse conditions that may: 1) affect the health and safety of the occupants, 2) affect the structural soundness of the improvements, 3) impair the customary use and enjoyment of the property. Specifically, with regard to Overhead High Voltage Transmission Towers and Lines, FHA loans are only impacted if a dwelling or related property improvement is located *within* a utility easement. In speaking with FHA approved appraisers, they do not contemplate location of a power line as relates to property in question when appraising the property – unless a structure is located *within* the easement.

10. Will the City put the line underground?

The City does not underground voltage higher than distribution voltage (12.5 kV). The utility is not equipped to handle high voltage underground. It is cost prohibitive to underground the lines. In evaluating the costs associated with underground design and construction, and collecting information from utilities that have underground high voltage, it is anticipated that the cost of the project will increase 5 – 10 times over traditional overhead construction costs. That level of increase will make cash funding the project cost prohibitive and would require bonding to complete the project. Additionally, Idaho Falls will have need to bond for additional generation in the near future. It has traditionally been the practice of the City to limit bonding to power generation needs.

11. Can the City underground a portion of the line to reduce cost exposure?

If the City were to underground a portion of the line, it would be necessary to identify an appropriate sectionalizing point at which to transition to underground and back to overhead. These points are viewed as “mini-substations”, which may not be visually acceptable to the neighborhood. These sections may not coincide with the publicly acceptable point of underground/overhead transition. The long term implications from an operation and maintenance perspective remain regardless of the amount of underground assets the City owns. There has been interest for underground expressed across the entire route. Once the City agrees to underground a portion of the line, there will be additional requests for undergrounding. So the likelihood of undergrounding only a portion is remote.

12. Where are you in the process of selecting a final route?

At the third public meeting in February 2010, the project team heard concerns from the public about the presented alignment. We heard suggestions to follow the Idaho Canal rather than East River Road. We heard suggestions to use West River Road heading north from W 65th and cross the River at 81st Street (a future transportation corridor across the River). And we heard suggestions to move the substation location to the west side of the river. We also heard suggestions to consider undergrounding segments of the transmission line. The project team is currently studying those alternatives to determine whether they are feasible for this project.

13. Why doesn't IF Power put the transmission lines underground?

- a. It's common today to see lower-voltage distribution lines that connect to homes and businesses buried directly in the ground using less invasive construction methods. However, high-voltage transmission lines require greater infrastructure. Placing transmission lines underground is a practice generally used only when there is no viable overhead corridor. It is important to note there are pros and cons to building lines overhead and underground. While there are aesthetic benefits to placing transmission lines underground, there are also drawbacks. Underground transmission lines present significant challenges due to the environmental disturbances, additional repair time and higher installation and repair costs. There are a handful of examples where transmission lines of approximately the same size as IF Power is building (161 kV) have been buried. One example geographically close to Idaho Falls is the Snake River Sporting Club Project in Jackson Hole, WY. In this case, the developer paid to underground approximately 8,000 linear feet of 138 kV (operated at 115kV) transmission line in the vicinity of his development. The developer paid the increased cost (\$5 million for 8,000 ft of buried transmission line, nine times the cost of the Idaho Falls Power project estimate) and passed that along to the home buyers.
- b. When a transmission line of this capacity is buried, it must be encased in concrete. The approximate disturbance along the alignment is 20-ft wide, and as long as the line is buried. It is not permissible to cultivate, farm, or plant on this 20' wide strip where the line is buried. And approximately every 1000-ft along the alignment, a vault must be installed. At these locations, concrete and an access into the vault are present at the surface. During construction, the excavation is approximately 8-ft deep by 20-ft wide (+/-), the concrete and conduit is installed, and approximately 1-2 feet of topsoil is laid on top of the concrete.
- c. At locations where the transmission line transitions from above ground to under ground, a "mini substation" must be constructed.

14. What are the impacts/mitigation for migratory birds if you put transmission lines across the river?

The Idaho Falls area supports a wide variety of wildlife including many bird species such as bald eagles and osprey along the Snake River. Electrocutions on power poles and collisions with lines by birds are a concern to Idaho Falls Power. Transmission line and pole design will incorporate

design elements that minimize electrocutions and bird collisions. Design considerations are based on such documents as, “Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006” and “Mitigating Bird Collisions with Power Lines: The State of the Art in 1994.” Besides design related mitigation features to minimize impacts, Idaho Falls Power is evaluating several river crossing locations with a key evaluation criteria being minimizing impacts to migratory birds.

Idaho Falls Power is working with the US Fish and Wildlife Service (USFWS) with the goal of minimizing impacts to wildlife especially migratory birds that are protected under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA). Idaho Falls Power recently conducted a field visit with USFWS along the potential transmission line route, river crossing area, and a potential substation site near the upper plant. Idaho Falls Power will continue to consult with the USFWS as the project advances and will ensure that the MBTA and BGEPA requirements are met to USFWS’s satisfaction.