NorthWestern Energy
Delivering a Bright Future

Meeting Notes

Thompson Falls Public Relicensing Meeting
October 15, 2019
Thompson Falls Community Center, 6:00PM – 8:00PM

Meeting facilitated by Mary Gail, NorthWestern.

Notes prepared by Kristi Webb, New Wave Environmental Consulting

Sign-In Sheet (scanned and uploaded to SharePoint)

Welcome – Mary Gail (MG) Sullivan

Introductions of NorthWestern

Safety Moment – Jeremy Clotfelter

Purpose of the Meeting – MG (via PowerPoint Presentation)

- License (1938, 1979, 1990 amendment for the new powerhouse, 2009 for building the new fish ladder) NorthWestern working on relicensing of 1979 license expires December 31, 2025.
- 92.6 MW (largest hydro NorthWestern owns)
- 5.5 years to prepare for relicensing. Voluntary activities such as workshop in Missoula (Northwestern and DNRC) to review FERC regulatory process for relicensing. Prepared a Baseline Environmental Document (BED). Relicensing process begins July 2020. List of resources addressed in the relicensing process. FERC requires we provide equal consideration for power and non-power attributes of the Project.

Thompson Falls Project Operations – Jeremy Clotfelter

- Baseload component – constant flow in plant and maximize generation.
- Flexibility generation
    - We as a company have to balance demand for energy. Call it "reserves" we can ramp up or drop energy for short-term.
    - Spill – when max capacity at powerhouse (near 24,000 cfs) is exceeded (the 24,000 cfs can all go through the plant), the rest has to go over the dam. Pass water through

the radial gates (4 now, 2 new in 2018), then trip stanchions if flows exceed dam capacity. If stanchions tripped, we have to wait until the river level goes down to fix and repair dam. Typically, we were tripping stanchions every 10 years (1997, 2011, 2018). The new radial gates would have eliminated those events in 2011, 2018. Noel - Flows around 115,000 to trip stanchions (with new gates in operation) However, sometimes stanchions may be tripped due to other factors. Sometimes dictated by debris and other things other than just streamflow.

Thompson Falls Relicensing – MG and Ginger Gillin (Power Point Presentation)

- Review of the FERC Process
    - Pre-Application Document (PAD) must file 5 to 5.5 years prior to license expiring. NorthWestern goal is to file by July 2020.
    - Public has many opportunities to comment. First opportunity will be following the filing of the PAD, FERC will have a scoping meeting and site visit in Thompson Falls. Study plan will be developed and implemented. License application is submitted no later than December 2023.
- Opportunities for stakeholder input outlined in PowerPoint

Reports on Studies/Monitoring since the Baseline Environmental Document (BED) – Andy Welch

- **Recreation - Kim Bergstrom (Pinnacle Research)**
- **Water Quality – Jordan Tollefson (NorthWestern)**
- **Fisheries – Jon Hanson (NorthWestern)**

Questions from the Public and NorthWestern Responses

1. Any limitation to passage during drawdown?
2. What type of mortality did you see from the drawdown in the pools?

   Jon H. – These topics will be covered next regarding the operational testing.
3. Who determines which species can be passed?

   Jon H. – FWP has jurisdiction to decide which species are passed upstream. Noel – All fish can go up the ladder, but not all can be passed. The ladder is not open to the reservoir. Fish go up the ladder and enter a holding pool that is then raised to the workstation.

All fish are handled with data collection (length, weight, etc.) taken prior to any release upstream. Fish cannot swim through to reservoir without being handled and physically passed and released into the reservoir.

October 2019 Operations Test – Jeremy Clotfelter

In our current FERC license (normal operational parameters), we have ability to use the top 4 feet of the reservoir. Currently, we don't hardly ever do that and I'll explain. Originally when Montana Power Company owned and operated the Project (until 1999), there wasn't a whole lot of need for flexibility. The use of intermittent generation sources such as renewables was not present. In 1999, PPL Montana (PPLM) purchased the Project. PPLM was a merchant electric generator and was not a regulated utility. It was not accountable for grid reliability and had no regulatory requirements to balance generation. NorthWestern did that for PPLM. In 2014, NorthWestern purchased the Project and is a regulated utility that owns and operates a transmission system that is obligated to balance energy. Over time, intermittent renewable energy sources have increased (wind, solar, etc.). The intermittent renewable energy resources contribute to the electrical grid. NorthWestern is regulated to balance the electricity on the grid. As base load resources drop off (e.g. coal plant at coal strip), NorthWestern must evaluate and identify resources to maintain reliability and balance of the grid. As a company, how do we maintain reliability to the grid and system with base load resources removed? NorthWestern is looking at any and all avenues. We have ability to evaluate available opportunities through the existing license at Thompson Falls through the flexible operations and use of the top 4 feet of the Thompson Reservoir. However, land use and residential development along the Reservoir has increased over time too.

FERC requires we balance resource use with electricity generation of the plant. Where do we strike the balance moving forward so that we can provide grid stability but minimize impacts? This is why we implemented the operational test: to begin to look at potential impacts and evaluate the operations in real time and collect real data to make informed decisions for the future in the context of the current environment (e.g. land use, natural resources, energy needs, operational systems, etc.).

On a fairly frequent basis we use some flexibility (fluctuate the reservoir) but not up to the 4ft allowed in the license. If we need to increase generation in an emergency situation, then we could have a drawdown that exceeds 4ft.

The October 2019 operations study was completed last week. Stream flows were around 12,000 cfs, which equates to about 40-45 MW energy. The test was designed to draw the reservoir down 4ft (ramp at full output) to evaluate the operational units as well as assess resource impacts

on the ground. Then we refilled the reservoir at 1-ft increments and looked at site impacts again at each 1-ft interval. We were thrown a bit of a curve ball due to a snowstorm over the same period.

Andy Welch – provided summary and discussion on what we saw on the ground and potential impacts to resources. We haven't had enough time to compile and analyze the data collected during the test. But we wanted to go through what our team is reviewing.

- Identify impacts, positive and negative to reservoir and river
- Monitoring strategy
    - Stage logging instruments
    - Time lapse camera at Thomson River
    - On-site evaluation of conditions
- Shoreline, fisheries, recreation, public safety, water quality, aquatic invasive species, wetlands/riparian habitats

Questions from the Public and NorthWestern Responses

1. You are the oldest provider of power to the grid. Why are you responsible for intermittent renewables?
    a. Jeremy – Because we are the designated transmission operator and reliability coordinator for this grid. Not every company is, but we are and the designation comes from FERC.
2. What would happen if you keep it at full pool all summer long and use coal fire plant generation to supply?
    a. Jeremy – What you typically see in the industry to balance the grid is a single cycle gas plant. We have to use any facility we have to support the problem and we have a suite of assets. Coal is not a fast responder to the grid. Coal does provide bigger chunks of energy but is slower to enter the system.
3. Concerning the drawdown, when at 4ft, my dock and ramp were on the rocks. If you have a wake board boat or fishing boat pass by and create waves, it will sustain considerable damage to property. What are we supposed to do?
    a. Jeremy – I understand and agree. This is one of the impacts. If we were in an operational mode of using the 4ft, it would be used all the time. Public – I am here to find out what is going on and how property values might be affected. We see similar impacts in Noxon.
    b. MG – We don't have an operational plan and we are in the process to evaluate options to prepare and describe desired operations for the new license. Jeremy – there is a reason we haven't used the 4ft. we understand there are issues. Public – if this starts going on in the summer there are going to be safety issues.

4. Can the people at FERC deny your license if you want the 4ft?
    a. NorthWestern – Yes.
    MG – We are hoping we find the balance.
    b. John T. – FERC is a federal agency. FERC has staff assigned to the Project that is in Washington DC. FERC will manage the relicensing of the Project. You (the Public and all Stakeholders) will have access to provide input in the process and to FERC.
5. Don Skaar – What role do the federal hydropower facilities have to helping out balancing the load?
    a. Jeremy – To my knowledge they have no responsibility to balance load within our region. They have other responsibilities that drive their operations.
6. What is the process to request a study?
    a. MG – The formal process will start next July 2020 after the PAD and NOI are submitted to FERC. FERC will come out to the site and host a public meeting. It will be a formal and structured process and they will solicit input at that time (September 2020).
7. Will you hold another meeting to provide results on the drawdown? Or was it timed on purpose?
    a. MG – Would this be helpful? Great idea. We certainly could.
8. How many of the boat ramps remain safe and serviceable at 4ft drawdown? How many ramps can you get a boat in or out safely?
    a. Andy – 4ft is challenging. We launched out of Cherry Creek. We can't give a concrete answer when it is safe to use at this time. We are still processing the data.
9. To wrap my head around this…FERC provides approval for the drawdown. The issue with the meeting is that half the people that need to be here are in Arizona. We need to have a public meeting in the summer to have more public involvement. It (the operation study) was like it was a big secret.
    a. MG – That was not our intent. We could have done a better job on our announcement.
    Jeremy – Our challenge as a company is that we need to be ready to provide power when needed. The other challenge is that in the development of the initial license 1979, nobody had the fore site of the challenges of the business and land use development in the area in the future.
10. You know a lot of the history of the dam. Why haven't they been using the 4ft drawdown?
    a. Jeremy – Originally the need for the power by MPC wasn't there. PPLM didn't have to provide it (not regulated). NorthWestern is regulated and must provide balance the grid. NorthWestern made a decision not to use the 4ft right after purchasing the Project in 2014 knowing the potential issues to the public and private resources. The challenge now is that we need a resource to provide balance to the

grid. NorthWestern is required through the PSC to provide economic, reliable, energy services. We have to look at all options.

11. Was public outcry part of PPLM and MPC decision not to do it (4ft drawdowns in the past)?
    a. Jeremy – I don't think so. The need wasn't there for those companies.
12. Have there been any discussions with NorthWestern about the silt (and removal) in the reservoir?
    a. Jeremy – There have not been any discussions.
13. Under your current license (through 2025) you have the ability to raise and lower 4ft at your discretion?
    a. MG – Yes, that is allowed by the license, but it doesn't mean we will do that.
14. Does it (the need for the 4ft drawdown) have anything to do with fossil fuel reduction in Washington?
    a. Jeremy – Personal opinion, yes. There is less baseline energy so the reduction in fossil fuel resources (which provide baseline energy) creates a larger need. It influences the overall picture. It's our job to have a reliable system.
15. Since we haven't gotten information from the test last week, how long is that going to take? When could we expect to see that and where?
    a. MG – If you put your email on the sign in sheet, we will notify everyone. NorthWestern needs to get notification of any future public meeting out earlier. MG – Likes the suggestion for doing another meeting, but it would be after the first of the year. I know it won't accommodate the Arizona people.
    b. Public – Also, people frustrated that didn't received notice of this meeting that do not get the paper. Communication was not great for the meeting or drawdown. Again, when will we have access to what your proposal is? Do we have access to the information before July 2020 (PAD submittal)?
       Jeremy – Operations piece in the PAD will be our best guess on what we want to do but is not final and will go through the study process.
16. Are you doing any studies on people's wells?
    a. Andy – Did not evaluate during this test.
17. If the proposed operations create impacts, you'll be required to pay mitigation to offset? Is this mitigation an operation expense?
    a. MG – It could impact our customers, unless the PSC disallows it.
18. Is there a window (frequency, duration, etc.) on the 4ft drawdown?
    a. Jeremy – Currently there are no limits. It took about 4 hours the other day to drawdown.
       Public – Is there is an industry standard?
       Andy – It is extremely site specific.
19. What is the baseline for the 4ft? Is 4ft drawdown lower in May than October.

a. Jeremy – It is 4ft from the designated full pool.

20. Are you accelerating or decelerating sediment transport?
    a. Jordan – We collected water samples and are looking at turbidity. We won't have results back from the lab for about 3 weeks.

21. Don't you have to look at the various time intervals and times for sediment release?
    a. Jordan – That is why we are looking at different seasons throughout the entire year.
    Andy – We also have monitoring stations for turbidity (recording in 15-min intervals) to look at the reservoir and downstream of the dam to evaluate changes.

22. Do you have any planned drawdowns for 4ft in the future?
    a. NorthWestern – No. We will continue to operate with flexibility using the water we have been using.
    Noel – We have a little variation we use. No changes from current status quo.

23. What's your maximum generation?
    a. Jeremy – Approximately 24,000 cfs.
    Public – You wouldn't do a drawdown unless the flow is below that? Jeremy – correct.

24. Does your application require a drawdown request?
    a. MG – No, but it has to include an operational plan for the future.
    Jeremy – If we identify the need for it, it will be in the proposed plan.

25. What is your average flow right now?
    a. Jeremy – About 12,000 cfs but I wouldn't say that is the average.
    Noel – July was around 9,000 cfs but it can be all over the place.

MG – will call it a wrap. Thank you for coming.

Adjourn 8:13 pm