

Utility Costs Assumptions and Dependencies

W. Oren, Dec. 2011

Generic Year:

- Nominal run year is 35 weeks split into two runs with no regard to summer power meter reading dates.
- A 32 week run year is investigated to avoid running between summer power meter reading dates to control demand power charges.
- Net savings will come from: 3 weeks less of running, a low demand power charge during the off months in the summer which will repeat every year, more single CHL operations and warming ESR to 300K

Remainder of FY'12, FY'13 & FY'14:

Overarching requirements:

- N & S transfer lines must be warmed up for maintenance ~2months/ea
- 8 cryomodule must be commissioned takes about 10 months
- CHL 1 must be warmed up for maintenance ~2months
- CHL 1 cooling towers must be replaced
- CHL 2 must be commissioned

Nominal 12 month downtime:

- N & S transfer lines are warmed up and worked on one after the other in concert with CM commissioning
- Cryomodule commissioning begins almost immediately and lasts ~10 months
- Requires CHL 1 to run continuously until ~December '12
- CHL 1 maintenance can be done starting Jan. '13
- CHL 1 Operations will require renting cooling towers to replace failing towers for ~6 months
- CHL 2 commissioning must start in the summer & CHL 2 won't be available to support CM commissioning until ~Jan '13
- Hall C wants ESR up for the first 7 months of the downtime
- Demand charge will be set at ~XXXXXXXXXX

16 Month Downtime:

Advantages:

- Allows the option to warm up CHL and ESR to 300K after beam operations terminate forgoing power costs, LN2 and He usage.
- Transfer line maintenance and CHL 1 maintenance can be done concurrently in a combined time frame of 3 months. Operations staff can be utilized to man maintenance operations
- CHL 1 cooling towers can be repaired and rental units will not be needed.
- Power tie-ins become less complex and possibly safer
- CHL 2 commissioning continues as “planned”
- A low demand charge will be set at ~XXXXXX

Disadvantages:

- CM commissioning is delayed until the fall of '12
- Hall C recommissioning of HMS is delayed

Meeting Agendas