

1 Q. **Re 2011 Capital Plan**

2 At page 6 the Capital Plan refers to a Project Prioritization methodology. Please
3 provide any materials or documentation Hydro has developed so as to explain how
4 potential projects are to be evaluated using this methodology.

5

6

7 A. The prioritization method is both a quantitative and qualitative approach to ranking
8 the importance of capital projects. Project prioritization has a two-level approach.
9 First, consideration is given to whether the project is required to correct an extreme
10 safety issue, meet mandatory demands (e.g. legislative) or satisfy system load. If
11 any of these three factors exist, the project is considered high priority and is placed
12 at the top of the prioritization list. For all other projects, 12 criteria have been
13 determined to prioritize the projects. Each criterion is given a maximum weighting
14 of a number of points out of a total of 1,000 points for all the criteria. For each
15 criterion, a number of factors have been identified and assigned a weighting
16 relative to the maximum weighting of the criterion. These factors represent the
17 impact level of that particular criterion on the project being evaluated. After
18 determining the impact, consideration is given to the probability of or the
19 confidence level in the impact occurring if the project does not proceed.
20 (Probability or confidence level is used depending on its appropriateness to the
21 criteria). The ranking score for each project is obtained through the sum of the
22 products of impact multiplied by probability/confidence level. A project with a
23 higher score is considered more important than a project with a lower score. The
24 table below presents the criteria and the assigned weights. Also, please see Pages 2
25 and 3, and Attachment 1 which provide a description of the prioritization criteria.

Criteria		Factors	Factor Weights
1	Work Classification (maximum weight = 85)	Normal Justifiable: Payback (70) Justifiable: Payback (40) Justifiable: Payback (10)	5 15 45 85
2	Net Present Value (maximum weight = 85)	NPV (\$0) NPV (<\$100K) NPV (<\$500K) NPV (<\$1M) NPV (>\$1M)	0 5 15 45 85
3	Goal 1: Safety (maximum weight = 100)	Minor Treatment Lost Time Disability	10 50 80 100
4	Goal 2: Environment (maximum weight = 100)	None Minor Moderate Significant	10 50 80 100
5	Goal 3-5: Alignment (maximum weight = 65)	None Maps but no documentation Maps but with documentation	15 40 65
6	Schedule Risk (maximum weight = 65)	External and internal conflicts Externals affecting completion No external but internal conflicts No conflicts	10 20 40 65
7	Continue service to customers (maximum weight = 70)	Can Can but with high costs Cannot	20 50 70
8	Number of customers impacted (maximum weight = 70)	< 100 < 1000 < 10,000 > 10,000	10 30 50 70
9	System Impact: Critical to (maximum weight = 90)	None specific System with standby unit Plant or station Entire system	5 50 70 90

Criteria		Factors	Factor Weights
10	Impact intensity (maximum weight = 90)	Minor Moderate Significant High	5 40 70 90
11	Loss type: Loss of	No type Equipment Facility Production Customer delivery	5 40 50 70 90
12	Loss mitigation (maximum weight = 90)	Redundant unit Backup option Nothing	30 60 90

PRIORITIZATION EXPLANATIONS

A. Level 1

Immediate HIGH Priority Projects

- **Extreme Safety**

The project is required to prevent an incident that could cause a fatality or correct a condition that otherwise left unattended may lead to a fatality.

- **Mandatory**

A capital expenditure that Hydro is obliged to carry out as a result of Legislation, Board Order, Environmental or Safety risk.

- **Load Driven**

The project is needed to meet load requirements determined by Hydro's latest load forecasts. Without the project, Hydro's firm load and/or reliability criteria will be compromised.

B. Level 2

1. Work Classification

- **Normal**

A capital expenditure which is required based on an identified need or historical patterns of repair and replacement.

- **Justifiable**

A capital expenditure which is justified based on a positive cost savings for Hydro. A cost-benefit analysis is required for the project.

- **Payback (70)**

A cost-benefit analysis indicates that the payback period for the project is within 70 percent of the anticipated life of the project.

- **Payback (40)**

A cost-benefit analysis indicates that the payback period for the project is within 40 percent of the anticipated life of the project.

- **Payback (10)**

A cost-benefit analysis indicates that the payback period for the project is within 10 percent of the anticipated life of the project.

1 **2. Net Present Value**

2
3 • **NPV (\$0)**

4 The capital proposal generates \$0 cost savings to Hydro.

5
6 • **NPV (<\$100K)**

7 A cost-benefit analysis indicates that the capital proposal generates a positive cost savings of
8 less than \$100K for Hydro.

9
10 • **NPV (<\$500K)**

11 A cost-benefit analysis indicates that the capital proposal generates a positive cost savings of
12 less than \$500K for Hydro.

13
14 • **NPV (<\$1M)**

15 A cost-benefit analysis indicates that the capital proposal generates a positive cost savings of
16 less than \$1M for Hydro.

17
18 • **NPV (>\$1M)**

19 A cost-benefit analysis indicates that the capital proposal generates a positive cost savings of
20 more than \$1M for Hydro.

21
22
23 **3. Goal 1: Safety**

24
25 • **Minor**

26 The project has no or minor safety issues that are insignificant in impact.

27
28 • **Treatment**

29 The project is required to prevent an incident or correct a condition that otherwise left
30 unattended may result in the need for medical treatment.

31
32 • **Lost Time**

33 The project is required to prevent an incident or correct a condition that otherwise left
34 unattended may result in worker(s) incurring lost time for a short duration.

35
36 • **Disability**

37 The project is required to prevent an incident or correct a condition that otherwise left
38 unattended may result in worker(s) incurring long time leave due to inability to continue
39 working on the job.

40
41
42

1 **4. Goal 2: Environment**

2
3 • **None**

4 The project has no environmental issues.

5
6 • **Minor**

7 The project is required to prevent an incident or correct a condition that otherwise left
8 unattended may result in an environmental impact that:

- 9 ○ Is irreversible within 2 years; and/or
10 ○ Will cost more than \$10,000 to mitigate; and/or
11 ○ Has aspects observed on Hydro's property (at point of impact); and/or
12 ○ Is perceived as in conflict with specific individuals in the local community.

13
14 • **Moderate**

15 The project is required to prevent an incident or correct a condition that otherwise left
16 unattended may result in an environmental impact that:

- 17 ○ Is irreversible within 4 years; and/or
18 ○ Will cost more than \$25,000 to mitigate; and/or
19 ○ Has aspects observed within a 1 km radius of Hydro's property (from point of
20 impact); and/or
21 ○ Is perceived as in conflict with the local community or other industries.

22
23 • **Significant**

24 The project is required to prevent an incident or correct a condition that otherwise left
25 unattended may result in an environmental impact that:

- 26 ○ Is irreversible within the foreseeable future; and/or
27 ○ Will cost more than \$50,000 to mitigate and/or
28 ○ Has aspects observed at more than 5 km radius of Hydro's property (from point
29 of impact); and/or
30 ○ Is perceived as in conflict with the local community and the general public and
31 other industries.

32
33
34 **5. Goals 3-5 Alignment**

35
36 • **None**

37 This project does not align with or support any department or corporate goals or objectives.

38
39 • **Maps but no Documentation**

40 This project does align with or support a department or corporate goal or objective but no
41 documentation exists to describe how it maps to the goal or objective.

42
43

1
2 • **Maps but with Documentation**

3 This project does align with or support a department or corporate goal or objective and there
4 is documentation that clearly describes how.

5
6
7 **6. Schedule Risk**

8
9 • **Externals and Internal Conflicts**

10 The project has external (to Hydro) dependencies that affect the completion of the project on
11 time and on budget and has major interfaces with other internal initiatives. Examples of
12 external dependencies are: non-Hydro projects that interfere with Hydro proceeding with its
13 project; unavailability of external contractors.

14
15 • **Externals Affecting Completion**

16 The project has only external dependencies that affect the completion of the project on time
17 and on budget.

18
19 • **NO Externals but Internal Conflicts**

20 The project conflicts with other internal initiatives that affect the completion of the project on
21 time and on budget.

22
23 • **NO Conflicts**

24 The project will not encounter any external or internal conflicts that affect its completion.

25
26
27 **7. Continue Service to Customers**

28
29 • **Can**

30 Service to customers can continue whether or not this project proceeds. Customers can be
31 defined as either internal or external to Hydro.

32
33 • **Can but with High Costs**

34 Service to customers can continue whether or not this project proceeds but a delay in the
35 project will result in Hydro incurring costs. Customers can be defined as either internal or
36 external to Hydro.

37
38 • **Cannot**

39 Service to customers cannot continue without this project. Customers can be defined as either
40 internal or external to Hydro.

1 **8. # Customers Impacted**

2
3 • **<100**

4 The project will impact up to 100 customers.

5
6 • **<1000**

7 The project will impact up to 1000 customers.

8
9 • **<10000**

10 The project will impact up to 10,000 customers.

11
12 • **>10000**

13 The project will impact more than 10,000 customers.

14
15
16 **9. System Impact: Critical to.....**

17
18 • **None Specific**

19 The project is not critical to any particular system.

20
21 • **System with Standby Unit**

22 The project is critical to a system that has a standby unit which could be used to maintain
23 operation or support continued service in the event of failure.

24
25 • **Plant or Station**

26 The project is critical to the proper operation of a generating plant or a terminal station.

27
28 • **Entire System**

29 The project is critical to ensure the reliable operation of the Hydro system.

30
31
32 **10. Impact Intensity**

33
34 • **Minor**

35 If this project does not proceed, the repair time is ***less than half*** the Maximum Acceptable
36 Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever comes first).

37
38 • **Moderate**

39 If this project does not proceed, the repair time is ***greater than the half but less than 90%*** of
40 the Maximum Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days
41 (whichever is comes first).

1 • **Significant**

2 If this project does not proceed, the repair time is ***within plus or minus 10%*** of the Maximum
3 Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever is comes
4 first).

5
6 • **High**

7 If this project does not proceed, the repair time ***exceeds by more than 10%*** the Maximum
8 Acceptable Downtime (MAD) of 830 MWh of unsupplied energy or 2 days (whichever is comes
9 first).

10
11
12 **11. Loss Type: Loss of.....**

13
14 • **No Type**

15 If the project does not proceed, no loss is expected.

16
17 • **Equipment**

18 If the project does not proceed, there exists a risk of the loss of some equipment.

19
20 • **Facility**

21 If the project does not proceed, there exists a risk of the loss of a facility.

22
23 • **Production**

24 If the project does not proceed, there exists a risk of the loss of production at a Hydro
25 generating plant.

26
27 • **Customer Delivery**

28 If the project does not proceed, there exists a risk of being unable to deliver power to Hydro
29 customer(s).

30
31
32 **12. Loss Mitigation**

33
34 • **Redundant Unit**

35 If the project does not proceed the expected loss will be mitigated by a redundant unit
36 present on the system.

37
38 • **Back-up Option**

39 If the project does not proceed the expected loss will be mitigated by a back-up option which
40 ensures that service continues.

41
42 • **Nothing**

43 This project is required because there is no available means to mitigate the expected loss.

PROBABILITY

• **Not Likely**

The risk of the impact is very low if the project does not proceed. It would be surprising that there is an impact.

• **Low Likelihood**

The risk of the impact is low if the project does not proceed. There is about 30 percent chance of the impact in the proposal year. It's less likely to happen than not.

• **Likely**

The risk of the impact is possible if the project does not proceed. There is about 50 percent chance of the impact in the proposal year. It's as likely to happen as not.

• **Highly Likely**

The risk of the impact is considerable if the project does not proceed. There is about 75 percent chance of the impact in the proposal year. It's more likely to happen than not.

• **Near Certain**

The risk of the impact is almost certain if the project does not proceed. There is more than 90 percent chance of the impact in the proposal year. It would be surprising if the impact did not occur.

CONFIDENCE LEVEL

• **Low**

The confidence in the assessment of the impact is low. There are some uncertainties that could significantly change the assessment. The projects risks are not well defined.

• **Medium**

The confidence in the assessment of the impact is uncertain but most likely correct. There are some uncertainties that might moderately change the assessment. The project risks are defined but with some uncertainty.

• **High**

The confidence in the assessment of the impact is very high. The uncertainties won't measurably change the assessment. The project risks are well defined and well controlled.

Date: September 20, 2010