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FMOC

Unresolved Facilities Needs (UFN) Scoring

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Sandia National Laboratories

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1.0 UFN Prioritization Scoring

The criteria below are used to score unresolved facilities needs (UFNs) when directed by PCD-037, *Performing Fire Protection Assessments*; PCS.072, *Condition Assessment* and PCS.100, *Resource Conservation*; and PED-002, *Program Element Description for Condition Assessment Surveys*. This scoring is not used for maintenance requests.

1.1 Mission Dependency (Weight 10)

Facilities Information Management System (FIMS) Mission Dependency Categories

- Mission Critical, Nuclear Weapons (5)
- Mission Critical, Non-Nuclear Weapons (4)
- Mission Dependent, Not Critical (3)
- Not Mission Dependent (1)

Sample problem: A utility project will replace buried, exterior chilled-water piping in Tech Area I (considered a considered a Site system).

Solution: From FIMS, site chilled water is categorized as Mission Dependent, Not Critical. Score Mission Dependency as (3).

> **NOTE** Although the chilled-water systems serve a number of mission critical buildings, the determination of mission dependency comes from FIMS for that asset.

1.2 Environment, Safety, and Health (ES&H) or Regulatory Impact (Weight: 10)

- Corrective action external to Sandia ***or*** results in high probability ***and*** high-impact ES&H hazard. (For hazards that present an immediate life safety threat, refer to PCS.099, *Request Management*) (5)
- Not corrective action but external requirement ***or*** results in high probability ***or*** high-impact ES&H hazard. (4)
- Internal corrective action ***or*** results in medium probability ***and*** medium impact ES&H hazard. (3)
- Internal requirement, not corrective action ***or*** results in medium probability ***or*** medium impact ES&H hazard. (2)
- None of the above ***or*** results in low probability ***and/or*** low-impact ES&H hazard. (1)

* **High impact** results insignificant facility damages from fire, flood, theft, etc. (>$500k; significant fines or penalties (>$500k) involving loss of license or jail sentence; or significant cost from loss of production, testing, or personnel time (>$500k, >200 people affected).

** **Medium impact** results in moderate property or equipment damages ($100k to $500k); fines or penalties or moderate cost from loss of production, testing, or personnel time ($100k to $500k, 50 to 200 people affected).

*** **Low impact** results in low property or equipment damages (<$100k), or low cost from production, testing, or personnel time (<$100k, <50 people affected).

Sample Problem: A project is the result of an internal corrective action and also presents a low probability of resulting in and ES&H fine of $200k.

Solution: The score for regulatory impact would be (3) based on internal corrective action. The score by ES&H concern is (2) based on medium impact. Score the project as (3).

1.3 Operational Risk (Weight 8)

- Results in high probability ***and*** high immediate impact to building operations. (5)
- Results in high probability ***or*** high impact to building operations. (4)
- Results in medium probability ***and*** medium impact to building operations. (3)
- Results in medium probability ***or*** medium impact to building operations. (2)
- Results in low probability ***and/or*** low impact to building operations. (1)

* **High impact** results in system shutdown or more.

** **Medium impact** results in equipment component shutdown.

*** **Low impact** results in other operation impacts not listed above.

Sample Problem: If not executed there is a medium probability that customer's operations will shut down.

Solution: This is medium probability, high impact. Score = (4)

1.4 Simple Payback (Weight 6)

- <1 year (5)
- 1-5 years (4)
- 5-10 years (3)
- >10 years (2)

NOTE Use TPC=TEC x 2. Simple Payback = Cost/Annual Savings.

Sample Problem: A project has a TEC (as entered on the UFN) of $60,000, annual electricity savings of $20,000/year, and other annual savings of $2,000/year. There is also a one-time avoided cost of $3,000 by completing this project.

Solution: TPC = 60,000 x 2 =120,000. Annual Savings = 20,000 + 2,000 = 22,000.
Simple Payback = (120,000 – 3,000)/22,000 = 5.3 years.
Score Economic Impact as (3), 5-10 year simple payback. Show calculations and include with UFN submission.

Alternative Calculation Methods: Analyze using the economic analysis tools as described in the National Institute of Standards and Technology (NIST) Handbook 135, *Life Cycle Costing Manual for the Federal Energy Management Program*. These tools include Life Cycle Costs, Net Savings, Savings to Investment Ratio, Adjusted Internal Rate of Return, and Discounted Payback. Assign a score on a scale comparable to those shown for Simple Payback, above.

1.5 Workforce Impact (Weight 6)

Workforce impact is measured by the number of people benefitted (or avoided negative impact) by completing this work.

- >300 (5)
- 100-300 (4)
- 50-100 (3)
- <50 (2)

Sample Problem 1: If not executed, failure could result in uncomfortable working conditions for 5 people located in the building handling all SNL/NM mail processing.

Solution 1: The number of people impacted is <50, score = (2).

Sample Problem 2: If not executed, failure could result in shutdown of the same building, which would halt mail delivery to all SNL/NM.

Solution 2: The number of people impacted is >300, score = (5).

1.6 Totaling and Using UFN Prioritization Scoring

Sample Problem: Assume a UFN scores (5) for Mission Dependency, (3) for ES&H or Regulatory Impact, (5) for Simple Payback, (3) for Operational Risk, and (2) for Workforce Impact.

The Total Prioritization Scoring is the sum of Score x Weight for each of the five categories. the total score = (5 x 10) + (3 x 10) + (5 x 8) + (3 x 6) + (2 x 6) = 150 out of a possible 200.

Program Managers use the UFN scores with consideration of optimal year, deferred maintenance, possible planned building/system decontamination and demolition (D&D), and type and availability of funding to bundle UFNs into projects and determine project execution by year.