



Institute of Nuclear Power Operations

Collective Radiation Exposure Performance for 2010 and Goals for 2015

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The 2010 CRE Goal

BWR goal is 120 person-rem. BWRs are not meeting the goal (over by about 13 person-rem)

PWR goal is 60 person-rem. PWRs are meeting the goal (under by about 5 person-rem)

PHWR goal is 80 person-rem. PHWRs are not meeting the goal (over by about 12 person-rem)

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BWR CRE Trend

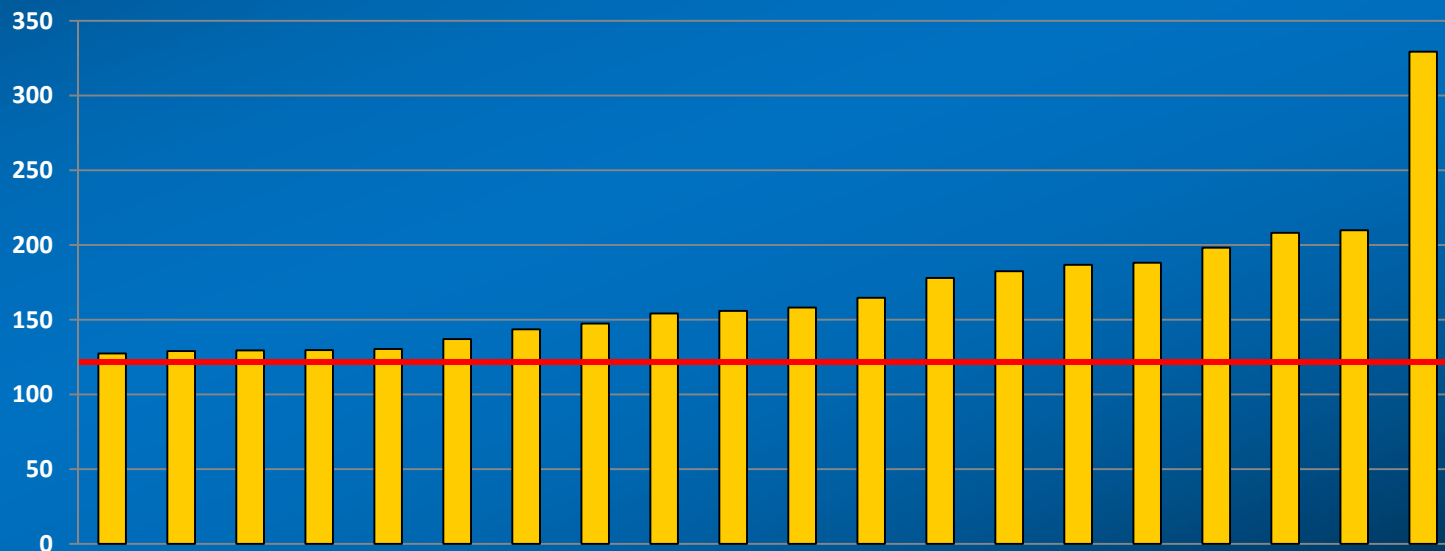
U.S. Collective Radiation Exposure (BWR) Median Values
Projected for end of 2010



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BWRs Not Meeting The Goal

- 20 of 35 units predict they will not meet the 2010 goal
- CRE for those units ranges from 127 to 349 person-rem



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BWR 2015 Goal

- Goal is 110 person-rem
- Range for Index Points
 - Maximum Points 110
 - Minimum Points 220

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PWR CRE Trend

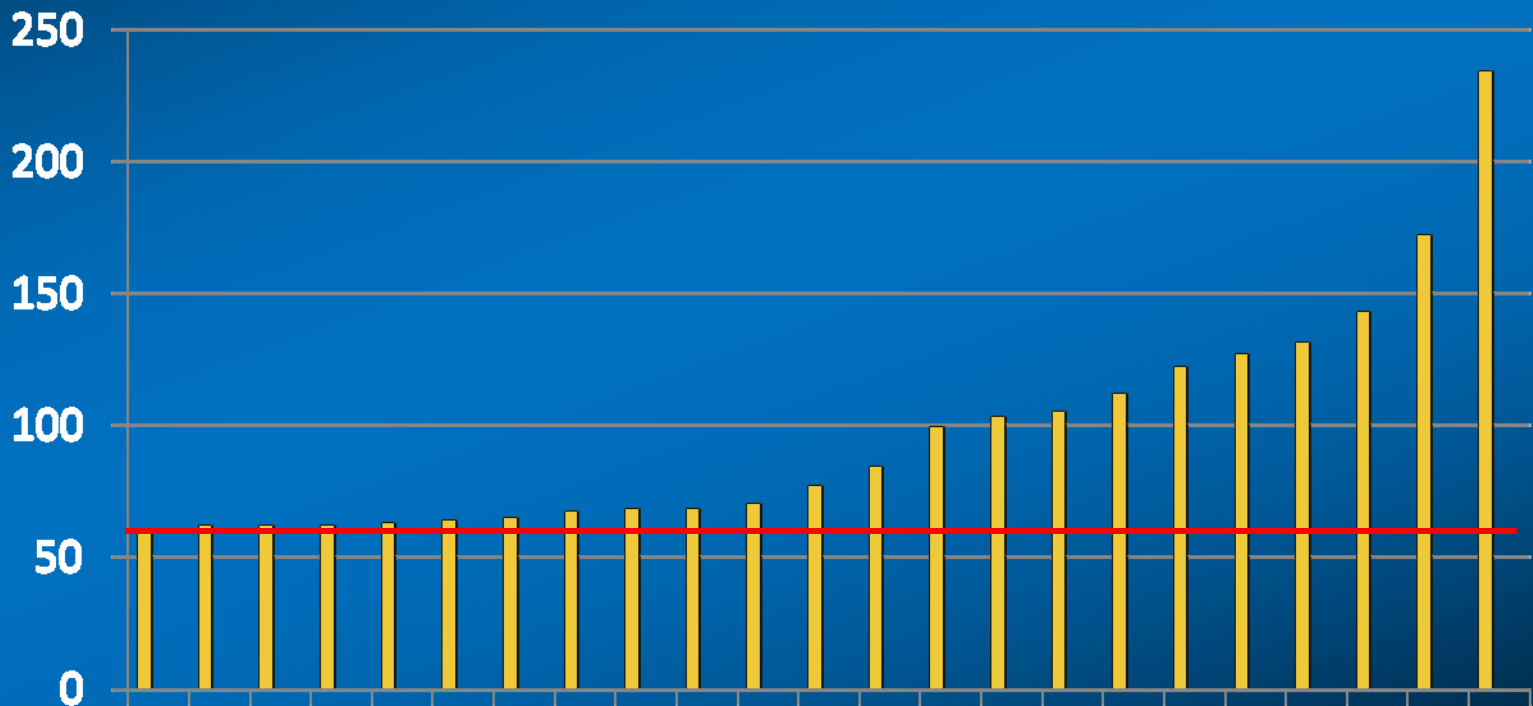
U.S. Collective Radiation Exposure (PWR) Median Values Projected for end of 2010



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PWRs Not Meeting The Goal

- 24 of 69 units predict they will not meet the 2010 goal
- CRE for those units ranges from 60.5 to 234 person-rem



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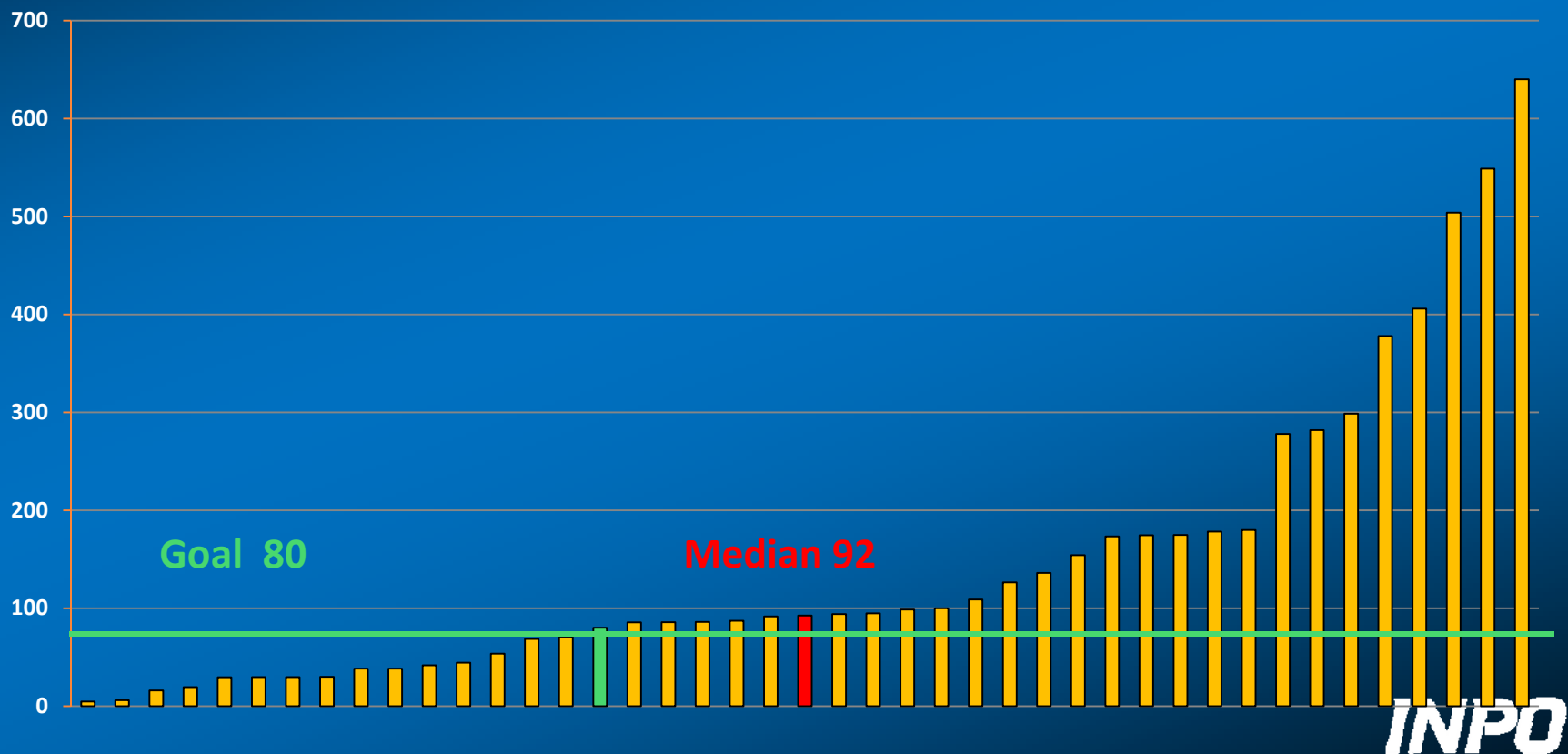
PWR 2015 Goal

- Goal is 55 person-rem
- Range for Index Points
 - Maximum Points 55
 - Minimum Points 120

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PHWR CRE

PHWR Collective Radiation Exposure (person-rem) Goal and Median Value as of July 1, 2010



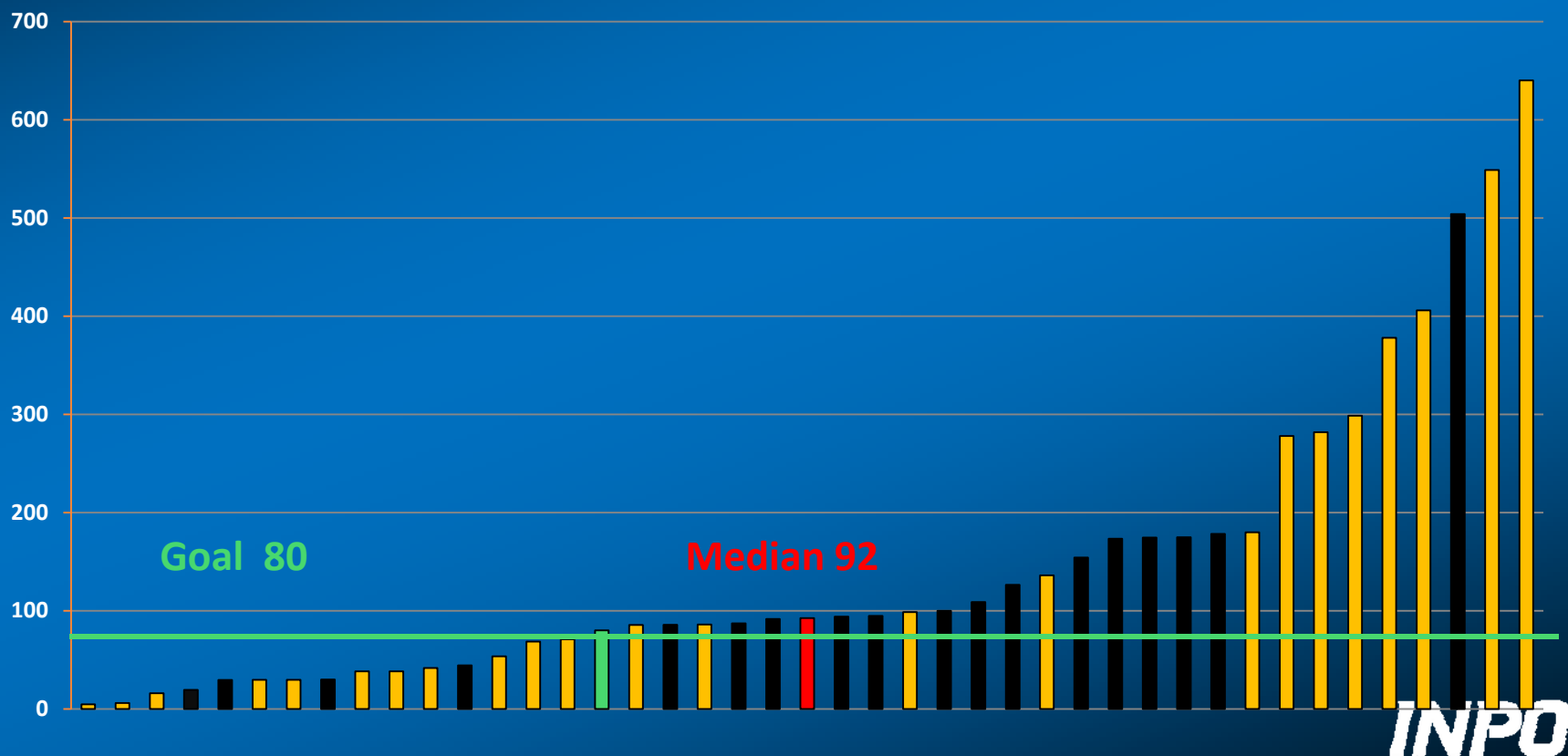
PHWR 2010 CRE Status

- 16 of 43 PHWRs are meeting the 2-yr goal of 80 person-rem.
- 4 of 18 CANADIAN are meeting the 2-yr goal
- The CRE range is 5 to 640 person-rem.
- The range for CANADIAN is 19 to 503 person-rem
- Index Points Range is 80 to 140 person-rem

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PHWR CRE

PHWR Collective Radiation Exposure (person-rem) Goal and Median Value as of July 1, 2010 (**CANDIAN Plants**)



Challenges to Meeting the Goal

- High Source Term/ Unexpected Dose Rates
- Emergent Work and Rework
- Major Outage Scope/ Refurbishment
 - Major pump work
 - ADHR modifications
 - EPU work
 - Steam Generator Replacements
 - Alloy 600 Work

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Actions Needed to Close Gaps:

- Station
 - Enhance senior management attention
 - Identify contributors and prioritize solutions
 - Obtain approval and funding
 - Project manage to completion

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Actions Needed to Close Gaps:

- INPO
 - Increase Focus (Industry Meetings, Webcasts, Evaluations, Review and Assistance Visits)
 - Communicate Availability of Resources
 - EPRI Cobalt Reduction Sourcebook
 - Crud Burst Checklist
 - Benchmarking Contacts

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INPO Actions - Details

- Issue Industry Event Report IER (level 2)
 - Require response/action plan from stations not meeting the goal (150 days from issue)
 - Evaluate the responses and progress on the actions during INPO Evaluations and WANO Peer Reviews

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INPO Actions - Details

- Identify stations/fleets requiring additional assistance
 - Work with the RPMs to perform in-office or site Assistance Visits
 - CRE Review Visits
 - Outage Planning Review Visits

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Comments/Feedback ?

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