IRP CoLAB

Driving Innovation in Resource Planning

What is IRP CoLab?

Advancing Integrated Resource Planning for a Clean, Affordable and Reliable Grid

What | IRP CoLab was formed to support power system planners as they evolve Integrated Resource Planning tools and practices for a rapidly changing energy landscape. By bringing planners together, IRP CoLab helps break down planning siloes, socialize best practices, and surface new planning insights.

Who | IRP CoLab brings together a diverse community of power sector practitioners, including open-source developers, public interest groups, industry groups, utility planners, academicians, and consultants, to discuss emerging planning issues and collaborate on real-world planning problems. GridLab and RMI coordinate IRP CoLab's meetings and activities.

How | IRP CoLab fosters a collaborative ecosystem of power system planners and a flexible, transparent, and innovative set of planning practices and tools. In the spirit of collaborative planning, IRP CoLab pays special attention to the role that open-source tools and data can play in meeting planning needs.

What does IRP CoLab do?

IRP CoLab advances collaborative, modern planning through three core functions:

Connect. We convene diverse stakeholders for constructive dialogue on innovative modeling practices, with an emphasis on open-source power system modeling. By bringing together utilities, regulators, intervenors, and technical experts, IRP Colab enables participants to speak a common technical language and ground insights in real-world planning experience.

Develop. We produce technical resources (e.g., best practice guidance, briefs on emerging planning topics) informed by both expert input and real-world application. These resources are designed to improve system reliability, cost-effectiveness, and transparency in IRPs.

Collaborate. We work with partners to test, refine, and apply improved modeling approaches in real-world IRPs, ground-truthing insights and ensuring they are practical, actionable, and responsive to evolving system needs.

What can IRP CoLab do for you?

1. **Partner with us on developing and testing ideas**
   Work with IRP CoLab to develop and test industry-leading practices for meeting planning challenges in active IRPs, other planning analyses, or research efforts. You might be a consultant, a researcher, or a utility — all are welcome!

2. **Join IRP CoLab events and discussions**
   Become part of a collaborative network of utilities, regulators, and experts shaping the future of Integrated Resource Planning. Reduce duplicative effort, learn from peers, and speed up high quality planning.

3. **Access insights, tools and resources**
   Engage with IRP Colab insights, resources, and convenings to stay informed and contribute to advancing modern planning practices across the industry.

What's next for IRP CoLab?

IRP CoLab's focus for 2026 will be:

- Sharing IRP CoLab insights through public engagement, like webinars and conference discussions;
- Ground-truthing our insights through technical collaboration between our community of planning experts, utilities and other stakeholders;
- Continuing to help planning practices keep pace with a rapidly changing power system through continued concept, tool and dataset development.
- As the power system evolves, IRP Colab ensures planning evolves with it, turning emerging challenges into practical approaches planners can implement in near-term IRPs.

What issues does IRP CoLab focus on?

IRP CoLab recognizes the need to evaluate the full planning cycle, from foundational assumptions and modeling through scenario analysis and the regulatory process of proposing, evaluating, and deciding on integrated resource plans.

Recently, IRP CoLab has focused on the following focus areas, based on real-world challenges that planners are facing in active IRPS:

1. **Transmission and Regional Coordination**
   Such as coordination between resource planning and transmission planning, regional resource sharing, and alignment across utilities and planning entities.

2. **Risk, Uncertainty, and Scenario Analysis**
   Such as scenario and sensitivity analysis, probabilistic planning, evaluating risk, and robust planning approaches.

3. **Resource Adequacy and Reliability Modeling**
   Such as reliability metrics, capacity accreditation methods, extreme weather and stress testing, and the treatment of clean energy and storage in IRPs.

4. **Stakeholder Engagement and Transparency**
   Such as improved data sets and data access, automation and reproducibility, and clear communication of modeling results.

To join or learn more about IRP CoLab, drop us an email!

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