IRP Stakeholder Comment: Candidate Resources

CEJA Workforce Development Hub| Joliet Junior College

Document: IRP Stakeholder Workshop 2: Candidate Resources
Submitted to: Joy Nicdao-Cuyugan, Stakeholder Meeting #2 Comment Form
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The CEJA Workforce Development Hub at Joliet Junior College appreciates the opportunity to submit comments on Workshop 2 of the Illinois Integrated Resource Plan and Resource Adequacy Mitigation Plan process. These comments build directly on our Workshop 1 submission dated April 21, 2026, and respond specifically to E3's request for stakeholder input on demand-side resource assumptions, including Virtual Power Plant composition, available capacity, and deployment parameters.

Our primary messages are:

- The workforce pipeline gap identified in our Workshop 1 comments extends directly to demand-side resource modeling. VPP deployment depends on the physical installation of DER building blocks, which requires trained HVAC and energy efficiency workers. That installation labor market is not reflected in E3's current demand-side assumptions.
- Energy efficiency is embedded as a baseline assumption in all ten IRP scenarios. If the workforce pipeline cannot deliver graduates at the rate those programs require, the baseline is overstated across every scenario. We repeat our request from Workshop 1 to test this assumption.
- E3's assumption that IRA tax credits expire in 2031 compresses the clean energy buildout timeline into a narrow window. This increases the urgency of workforce supply constraints that are currently absent from the model.
- E3's own presenter acknowledged during Workshop 2 that construction labor training is a key limiting factor in scaling emerging energy technologies. We submit that the same constraint applies to HVAC and energy efficiency deployment at VPP scale.

Questions 1, 2, 3, and 5: Candidate Resource Types, Categories, Cost Assumptions, and Commercial Availability Timelines

The workforce pipeline is absent from both supply-side and demand-side modeling.

Our Workshop 1 comments documented that DCEO's Illinois Clean Jobs Workforce Network Program Annual Report (April 1, 2026) contains detailed public data on the clean energy workforce pipeline that has not been incorporated into the IRP framework. That gap remains unaddressed. We restate our recommendation that the Agencies direct E3 to incorporate DCEO's workforce pipeline data as a public data source within the candidate resource framework.

Workshop 2 makes this gap more visible. E3 presented development timeline assumptions for supply-side resources that account for interconnection queue constraints, permitting, and financing timelines. The same framework should account for workforce supply as a constraint on installation and commissioning timelines, which we submitted as Sensitivity 1 in our Workshop 1 comments.

Source: DCEO Illinois Clean Jobs Workforce Network Program Annual Report, April 1, 2026. dceo.illinois.gov/ceja.html

The IRA cost cliff increases the urgency of workforce supply constraints.

E3 is modeling under current law from the July 2025 budget reconciliation bill, which sets production and investment tax credits for wind and solar to expire after 2030. Projects reaching commercial operations after that date will not be eligible for those credits under current policy. The Illinois Resource Cost Workbook confirms this assumption and shows differentiated cost impacts across technologies. Onshore wind faces a material cost increase after 2030 when the production tax credit expires, with levelized fixed costs in the workbook rising from approximately $108 per kW-year in 2030 to approximately $193 per kW-year in 2031. Solar PV costs continue to decline after 2030 as technology learning curves outpace the value of the expiring investment tax credit. The credit expiration therefore creates a compressed timeline specifically for wind development and adds urgency to completing planned wind capacity before 2031. For solar, the cost trajectory continues favorably, but the overall buildout pace across all resource types creates pressure on the installation labor market in the near-term window.

A compressed timeline under existing assumptions increases the exposure to workforce supply constraints. If installation labor is insufficient to complete projects before the **2031 cost cliff,** the IRP's near-term projections will be wrong in ways that compound over time. The Agencies should note that this dynamic makes our proposed Sensitivity 1, testing development timeline delays of 12 to 18 months, more consequential under E3's own cost framework.

Source: Illinois Resource Cost Workbook, E3, posted April 2026. Data Sources tab confirms NREL ATB 2024 anchoring with tax credit expiration per current law.

E3's own presenter confirmed workforce as a scaling constraint.

During Workshop 2, E3 presenter Nate Miller acknowledged that for emerging technologies with unproven supply chains, individual workforce training and the ability of construction labor to repeatedly execute installations are key learning curve constraints on deployment at scale. While his remarks were directed at nuclear and long-duration storage specifically, we submit that the same constraint applies to mature technologies at the deployment volumes the IRP requires. HVAC upgrades, energy efficiency retrofits, and distributed solar installations each require trained workers executing at volume across a compressed timeline. The workforce training pipeline that produces those workers is documented in DCEO's Annual Report and has not been referenced anywhere in the IRP framework.

Source: IRP Workshop 2 Transcript, April 10, 2026. icc.illinois.gov/informal-processes/Integrated-Resource-Plan

Questions 6, 7, and 8: VPP Modeling Approach, Building Block Rankings, and Parameters

E3 requested stakeholder input on four VPP parameters: composition of DER building blocks, available capacity by program and region, duration and frequency of response, and cost. Our comments address the second parameter directly and note an analytical gap in how the first is framed.

VPP deployment capacity is constrained by installation labor, not just enrollment.

A Virtual Power Plant is an aggregation of distributed energy resources including smart thermostats, HVAC demand response equipment, behind-the-meter batteries, and managed EV charging systems. These resources do not exist in enrolled households by default. They have to be physically installed by trained workers before they can be enrolled in a VPP program.

Our hub trains HVAC technicians and energy efficiency workers. Those are the workers who install heat pumps with smart controls, building energy management systems, HVAC demand response equipment, and weatherization measures that enable residential and commercial buildings to participate in VPP programs. We submit that regional installation labor availability is a factor that should be evaluated as a constraint on VPP deployment capacity and therefore on the participation assumptions E3 uses when modeling the representative VPP. This factor is not currently reflected in E3's demand-side framework.

CRGA requires ComEd and Ameren to file VPP tariff proposals by June 1, 2026. The participation and MW availability figures E3 is asking stakeholders to provide for those programs will be grounded in assumptions about how fast eligible equipment can be deployed. That deployment rate is a function of the available installation workforce. We request that E3 incorporate regional workforce data from DCEO's Annual Report as a constraint on VPP deployment capacity assumptions, alongside utility enrollment projections.

Source: CRGA, Public Act 104-0458, Sections 16-201 and 16-202. icc.illinois.gov/informal-processes/Integrated-Resource-Plan

The energy efficiency baseline in all scenarios is a workforce-dependent assumption.

E3 stated during Workshop 2 that energy efficiency is embedded in the latest utility load forecasts as a baseline assumption across all ten IRP scenarios. This means that before the model makes a single selection, it assumes a certain amount of electricity demand has already been reduced through utility efficiency programs.

Delivering that baseline requires a trained workforce of energy auditors, HVAC technicians, and weatherization crews to conduct assessments and perform upgrades in homes and commercial buildings across Illinois. Across the Illinois Clean Jobs Workforce Network, 153 graduates have been placed in clean energy jobs statewide since launch, with the hub network training for solar, electric vehicles, energy efficiency, HVAC, etc. If the pipeline is not producing graduates at the rate the baseline programs require, the load forecast embedded in every scenario is overstated and resource adequacy projections are understated.

We repeat our request from Workshop 1 that E3 test energy efficiency program achievement at 100%, 75%, and 50% of baseline targets as Sensitivity 2, applied to the Base Case scenario. Workshop 2 reinforces the case for this test: if EE is a baseline assumption across all scenarios, then the sensitivity of the entire modeling framework to EE underperformance is larger than it would be if EE were modeled as a discretionary addition.

Source: DCEO Annual Report, April 1, 2026, p. 8 (153 clean energy placements statewide). dceo.illinois.gov/ceja.html

Questions 4 and 9: Emerging Technology Cost Assumptions and Assumptions Workbook

We do not submit technical comments on the cost assumptions for nuclear, long-duration storage, or gas resources, as these are outside our area of expertise. We note two observations relevant to our workforce equity mandate.

Equity Eligible Contractor participation is absent from all candidate resource assumptions.

The candidate resource framework presents cost assumptions for each technology type but contains no input for the share of construction and installation contracts that would be awarded to Equity Eligible Contractors. CRGA directs $7 million per year specifically to support EEC participation in clean energy contracts and requires the IRP to evaluate equity impacts and opportunities under Sections 16-201 and 16-202. Neither the supply-side nor demand-side candidate resource presentations in Workshop 2 addressed this requirement.

We repeat our request from Workshop 1 that the Agencies specify how the CRGA equity impacts requirement will be operationalized in the IRP and that E3 test Equity Eligible Contractor participation at low, medium, and high levels as Sensitivity 3 in the Base Case scenario. The candidate resource cost workbook is the appropriate vehicle for incorporating EEC participation as a modeling parameter. It is not currently present.

Source: CRGA, Public Act 104-0458. IPA Energy Workforce Equity Portal. energyequity.illinois.gov

Closing

Workshop 2 confirms that the demand-side modeling framework, like the supply-side framework presented in Workshop 1, does not account for the workforce required to execute what the plan proposes to build. Energy efficiency is a baseline assumption in every scenario. VPP deployment depends on equipment installation. Both depend on a trained workforce that is documented in DCEO's public Annual Report and has not been incorporated into any aspect of the IRP framework.

The compressed timeline created by E3's IRA tax credit expiration assumption makes this gap more consequential. If the near-term buildout relies on a workforce that the plan has not accounted for, the most critical period in the entire IRP horizon is also the most exposed to the constraint this comment has now raised in two consecutive workshops.

We request that the Agencies carry forward all four requests from our Workshop 1 submission into the Workshop 3 cost impact methodology and Workshop 5 draft capacity expansion results. We look forward to continued engagement through the remaining workshops and the ICC proceeding.

We appreciate the opportunity to participate in this process.