**Meeting Summary**

*[Note: descriptions of presentations and discussion are condensed summaries and paraphrases]*

**Item I: Opening and Introductions**

Working Group Leader, Dr. Lynne Kiesling, opened the meeting and welcomed participants. ICC Executive Director Cholly smith presented the purpose and process for the overall study.

**Item II: Presentation by Working Group Leader *(see presentation)***

Dr. Kiesling interacted with Working Group Members regarding the overall structure and topics for discussion in this working group. The Working Group will focus on an open inquiry of ideas, and ask members to bring expertise, curiosity, and good will. Members are encouraged to bring expertise but leave role and identity at the door as you come in.

Unlike other working groups who work within a particular framework that has already been established, this working group will focus on the unknown and what the future "could be." One person emphasized this Working Group will require unorthodox thinking.

The goal is to provide a roadmap to market design and what can be achieved. Market functionality should be explored and discussed before assigning roles and models. The design-thinking method will be observed. Under design-thinking, members typically:

1.) Start with a brief, what are we trying to accomplish;
2.) Go out and talk to people and observe how they interact with your brief and gather information and data;
3.) Generate ideas through an open -minded ideation process;
4.) Draft a design prototype; and
5.) Test the prototype using design principals;

Working Group Members comments included:

- Add "strong, safe, and reliable grid" and "peer to peer transactions" to the working group brief.
- Challenge a couple of assumptions. Currently not totally integrated market. Have to define what success is from a successful market – customers choosing most economical option or customers choose most desired option.
- Have to understand there is a wholesale market, so we can't just ignore that fact. Have to think about the interaction with the wholesale markets.
- Instead of energy being procured from the wholesale market, energy could be procured through peers in the distribution. But to have that, there must be operational aspects and market rules that will have to be established.

- How do you monetize and measure resilience?
  - fear there may be a danger of how resilience may be defined.
  - a lot of customers have behind the meter data and don't need 99.999% of reliability.
  - Don't want to defer from definition of reliability from working group 3 meeting
- We hear retail market come up in different senses. retail transaction vs. wholesale transition.
  - Definition of retail?
    - 3 main differences between wholesale and retail transactions–
      - 1. Gate closure time wholesale market based on bids, but retail is not reliant on bids
      - 2.) number of participants
      - 3.) wholesale – have mainly human being trading. Here building intelligence in devices themselves.
    - Incentives
    - Is it more of a hypothetical retail transaction world or a world that fits within federal limits. Are we cutting off some technological benefit from rules we cannot change?

**Item III: Group Discussion** (*working group member were asked to break into small groups to tackle he listed questions below)*

1. ***Describe key features of Illinois decentralized retail electricity market – in what way/how much is Illinois's retail market decentralized?***
   - Found 5 different aspects
     - 1. Centralized power markets
     - 2. 35k residential zone and hourly
     - 3. Aggregation into wholesale
     - 4. People who do things that relate to and effect power market but not directly involved
     - 5. Bilateral and financial contracts
     - 6. Retailers
   - What is decentralized – marginal pricing for generation or multiple hub and spoke model
     - All agreed not distributed portion of market but some areas multiple areas of suppliers providing different products.
     - Range of end users, but not into the markets.
     - Retail level – have over 100 retail suppliers across the state

2. ***What are some desired outcomes from having decentralized retail electricity markets?***
   - Efficiency and low transaction costs and lower incremental costs
     - Innovation
     - Elimination of price distortion and more price accuracy
     - Variety of transaction platforms

- Provider to have choice between supplying retail and wholesale markets
    - Ability to manage a large number of transactions
    - Ability to isolate from the grid and provide resiliency
    - More predictability
    - Desire for liquidity in having a decentralized market
    - Liquidity
- everything should be informed by and conscious of the customer experience.

***3.) What are the important design principals in decentralized retail electricity markets – what concepts are important to use when evaluating market design choices? Rank them from most important to least important.***

- Response 1 - Discussed 3 ways we may evaluate markets rules for this setting
    - 1. Transparency – education on types of services being provided and the fine print
    - 2. Equitability – low barriers to participate – important that rules are specified and if any barriers explain why they are there
    - 3. Efficiency – minimize costs & characterize what type of transactions people like to do.
- Response 2 - 8 principals
    - 1.) maximize social welfare in public interest
    - 2.) maintain integrity of the system
    - 3.) efficiency
    - 4.) consumer protection and fairness
    - 5.) taking advantages of advanced technology and innovation for customer benefits
    - 6.) simplicity
    - 7.) transparency
    - 8.) flexibility
- Response -3
    - 1.) be as competitive and market based as possible
    - 2.) simplicity for customers and vendors even if market is complex
    - 3.) utility still need to be viable and profitable business and provide to support market but not market agnostic
    - 4.) equitable access to information – don't use data as an entry barrier
    - 5.) privacy for customers
- Response – 4
    - 1. LSEs (load serving entities) in IL can bid into MISO and PJM capacity market, aggregators of retail customers ARCs participate in these markets as well - there is customer choice, that's a key feature of IL retail market
    - 2. defer T&D investments, price transparency at distribution node level, market for services such as voltage reduction, black start etc.
    - 3. Compliance with FERC orders, opportunities for non-transmission alternatives, avoid uncertainty on rules
- Response 5

- Market design options will evolve as DER penetration increases and will probably require several incremental steps between today and a fully realized distribution market. A key fundamental principle is, therefore, "design with the ability to evolve in mind." Accepting that we don't understand all implications of a decentralized retail electricity market at this stage is essential. We need to design the market platform for gradual change and evolution as we learn more. As a core purpose, any future market structure should be designed to provide customers and the communities they live in with access to a much wider variety of energy services choices. Customers should be able to exercise those choices to yield financial and environmental benefit for them and their communities, supporting broader community opportunity and growth. The market should provide, and regulation should enable, grid-related products and services that are responsive to evolving customer needs.
- The design of a decentralized retail electricity market requires thorough research of industry trends, similar initiatives being carried out by other organizations, lessons learned, and extensive education and debate involving decision-makers and stakeholders. A list of key design layers is provided below. These key layers are not ranked from most important to least important as they all represent necessary and required steps to establishing a decentralized retail electricity market.
    a. Foundational layer; which includes foundational infrastructure and resources, organization and processes, standards and models, and business and regulatory. The foundational infrastructure comprises the most essential components of an electric utility, largely responsible for a reliable and resilient service, on top of which all remaining layers are built. On the resources side, a key trade of the workforce is a multidisciplinary training, which in the specific case of engineering personnel includes having knowledge not only of power systems, but also market environment.
    b. Enabling layer; which includes enabling infrastructure and incremental intelligence. This layer comprises all new intelligent assets and communications and information systems infrastructure that traditionally had not been used extensively in the grid but are now required for ensuring a system-wide monitoring and control.

- Response 6 –
    - 1. Choice -there are a myriad of retail electric suppliers all offering fixed and variable products for specific terms.
    - 2. Lower prices and more innovation.
    - 3. Transparency and efficiency; easy access, multiple buyers and sellers.

- Response 7 –
    - Maintain customer choice
    - Market should convey value
    - Designing market with ability to evolve

- Transparency and efficiency
- Ease of access
- Ensuring technology market technology is viable
- Believe customers should be put front and center. Question of what should be done should be for some types of benefit for the customer. And that there are different types of customers out there which have other benefits and values
    a. Shouldn't focus on which benefit for which customer and who pays, but look more as a net value for customers.
    b. Marketability to accommodate regulatory and policy decisions - echoes importance of putting customer first and should be conscious of state rights and decisions to implement programs (ex. Zero emission and renewable portfolio)
- Infrastructure
- Incremental intelligence
- no barriers to entry of customer-sited IOT technologies
- price transparency,
- ability to aggregate end-points (Customers/Agents)
- equality or fair access is important both for customers and for ensuring that the market is technology neutral.
- Ensuring the markets stay markets. Meaning we have seen efforts that have swayed us back into a deregulated marketplace in Illinois and if we want the markets to work, we have to continue to adopt market-based solutions; ensuring competitive electricity costs for all consumers - residential, commercial, and industrial users; ensuring the markets stay technology neutral and adoptable.
- markets must convey value, appropriately value and compensate, markets are accessible to customers, there is trust in the marketplace and response, markets are verifiable, and result in efficient operations.
- respect state's rights (i.e. state level programs like the RPS and ZES)

***4.) General Comments***

- One thing to keep in mind is that Illinois' decentralized retail market consists of a large number of passive participants: 90% of Ameren's retail market is part of a municipal aggregation program; In ComEd territory, it's40%. Most of these customers have not made an active decision to be part of the retail market, but the data is wrongly interpreted as if they did.
- Recommend a couple of strawman models for how future markets may work. Important not to be too rooted in the present. Can't get overly hung up on cost benefit analysis and whether we can handle all transactions. Have to value what we want to see and then figure out how to get there.
- Lessons from other industries – amazon (doesn't own most of items selling); Airbnb, etc. each of these platforms grow and adapt to what they are doing then evolve to other things.

- There are implications of platform for markets and grid services. Think about what's the desired future state and then what's the gap to get there?

**Item IV: Adjourn**