Resource Adequacy and Electric Reliability

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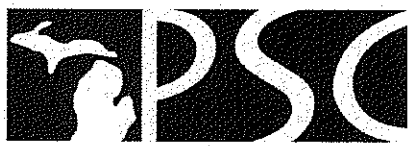
Presentation to Michigan Senate Energy & Technology Committee
August 24, 2016

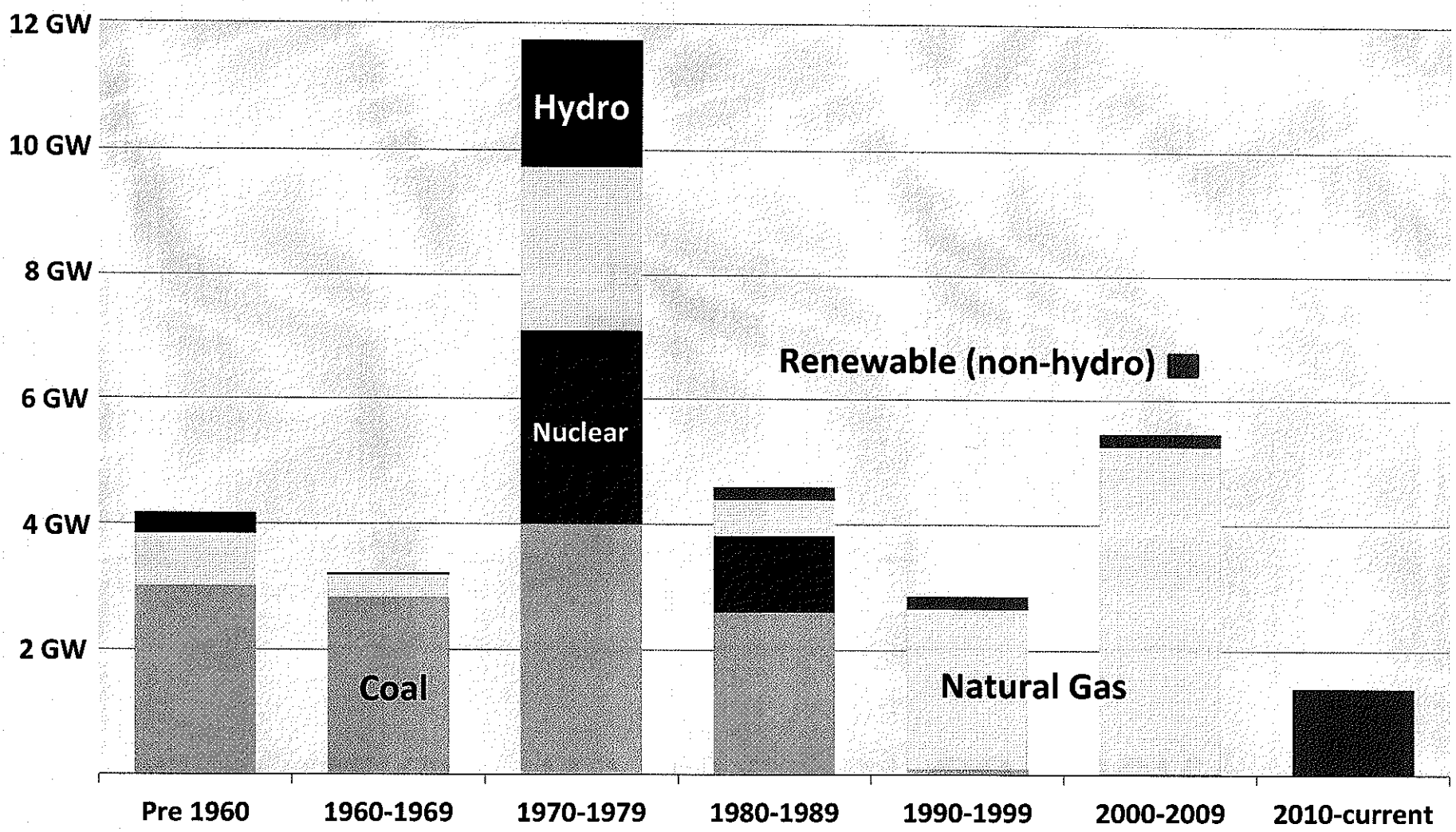


MICHIGAN PUBLIC SERVICE COMMISSION

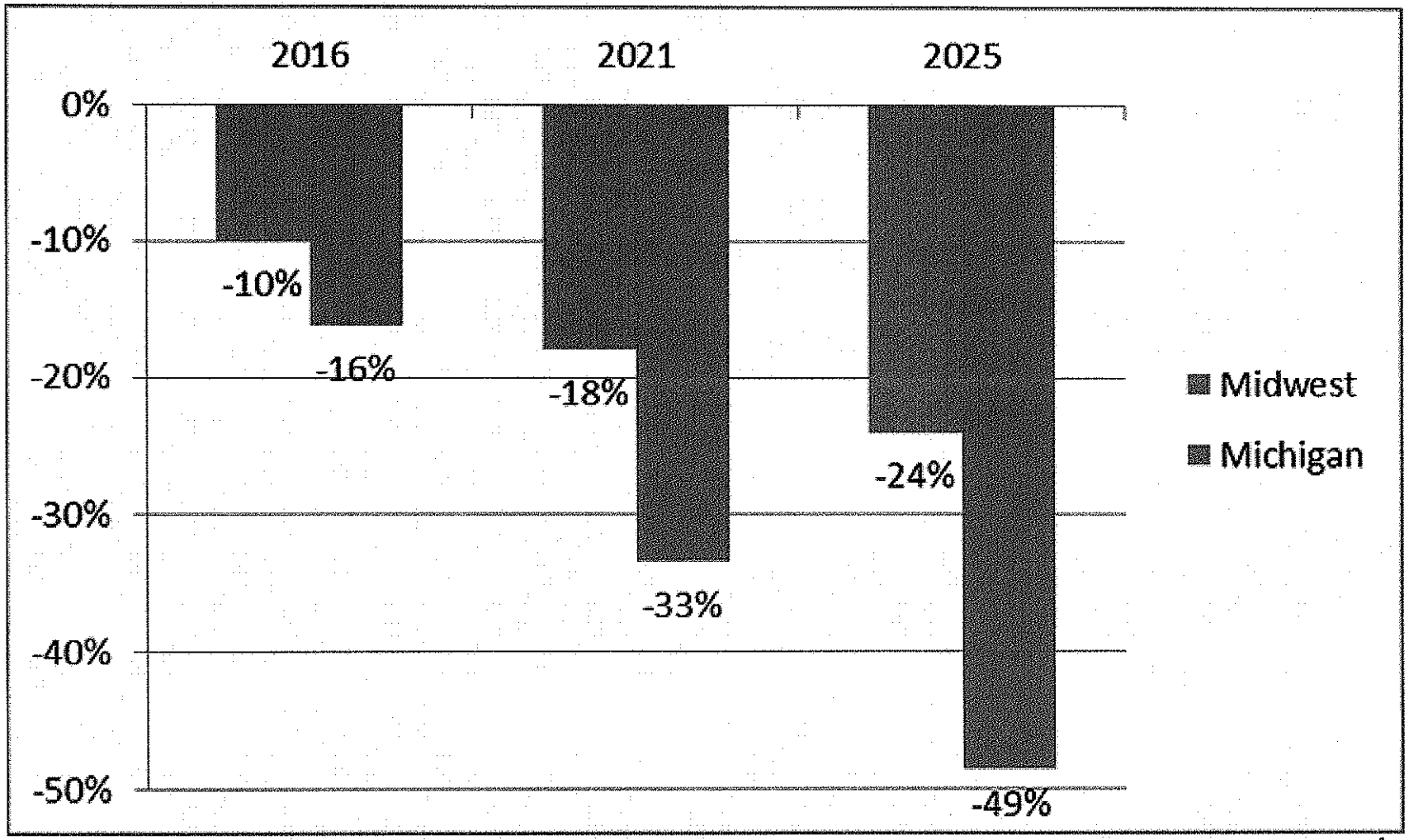
Fundamentals

- Types of reliability
  - Operational (day to day) – Operating generation and transmission system within equipment and system limits to maintain stability
  - **Resource adequacy** – Ensuring enough resources to meet aggregate demand at peak times
    - Assumptions about future supply and demand
    - Buffer (reserve margin) to account for fluctuations in demand or supply

What was built and when in MI

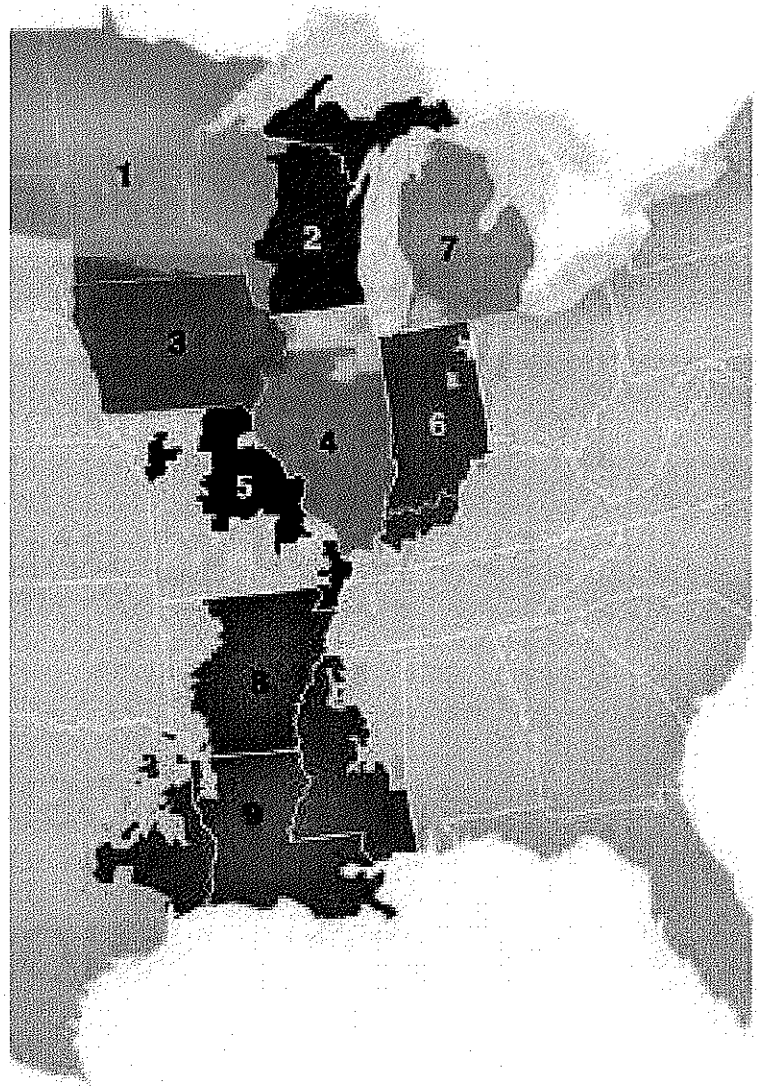


Reductions in Coal Capacity



2018 MISO Regional Outlook

- **400 MW shortfall** in reserve margin for MISO region if power plants retire in IL as announced



What are we doing about it?

- MAE/MPSC letter to MISO
- OMS/MISO survey
- Participating in Legislative Discussions
- Participating in MISO Competitive Retail Solution Proposal Discussions
- Multiple MPSC Proceedings
  - Demand Response
  - PURPA
  - Annual Capacity Assessment

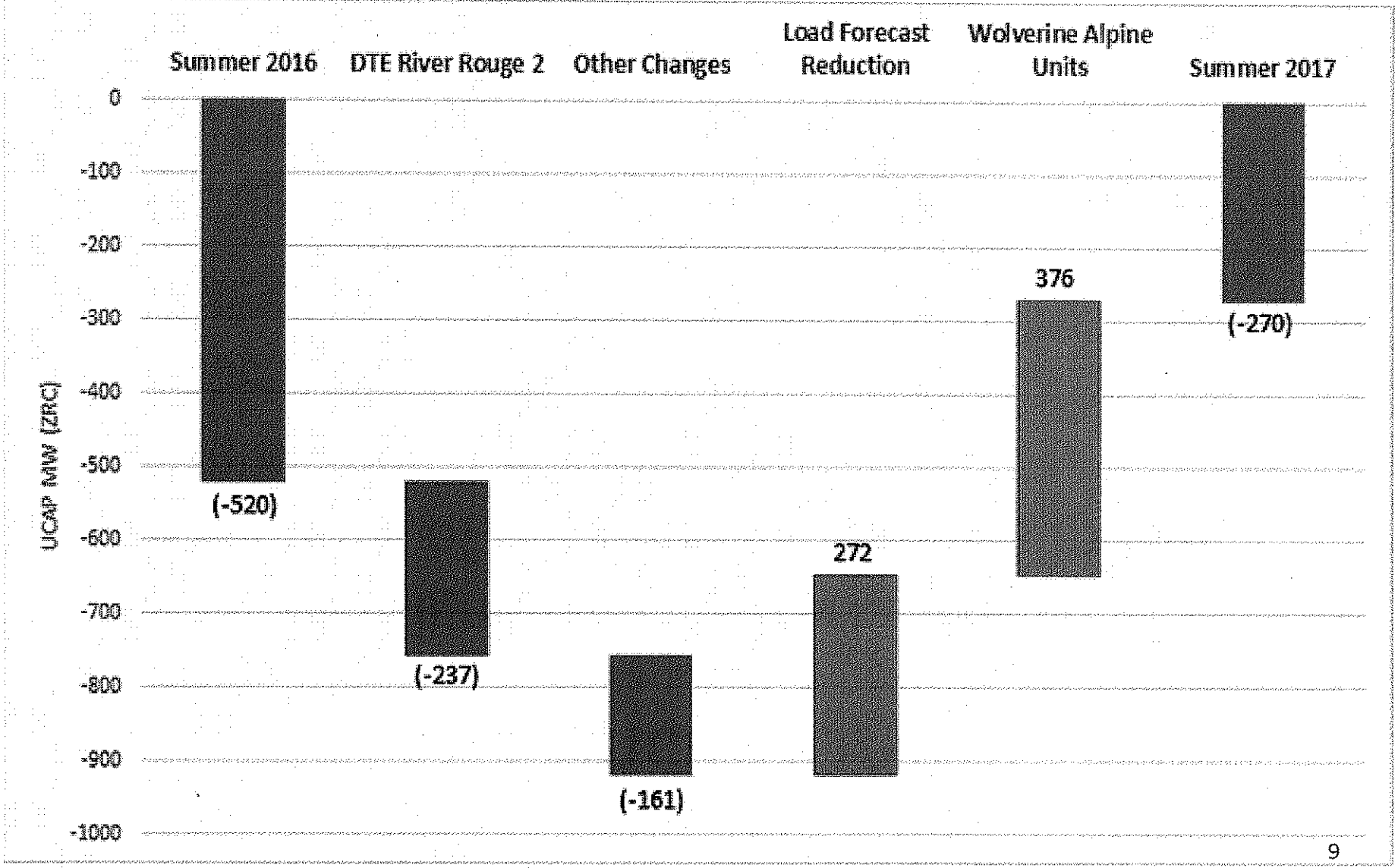
MPSC Capacity Resource Assessment

- Since 1998, the MPSC has annually held a proceeding to review capacity supply and projected demand
- Electric providers asked to file annual assessments of plans to meet customer demand
- On December 22, 2015, MPSC initiated Case No. U-17992
  - Supply and demand five years out (2016-2020)

Case No. U-17992 Staff Findings

- MPSC Staff looks at both local reliability need and ability to import resources from elsewhere in region
- MPSC Staff projects a minimum import requirement of 270 MW (1% of overall capacity need) to meet capacity requirements in much of the Lower Peninsula in summer 2017
- Historically, MI has been able to rely on regional supplies to make up any local reserve margin shortfall
- Concerned about adequate MISO supplies being available to meet need as early as 2018

What changed since last year?



Conclusion

- MPSC has significant concerns due to projections of tightening capacity supplies both locally and regionally
  - Michigan
  - MISO
- Michigan needs the tools to address potential shortfalls
- Questions?

Appendix

Case No. U-17992 Staff Findings

	PY 2017/18	PY 2018/19	PY 2019/20	PY 2020/21
Planning Reserve Margin Requirements (PRMR)	22,406	22,406	22,406	22,406
Local Clearing Requirement (LCR)	20,851	20,851	20,851	20,851
Capacity Import Limit (CIL)	3,521	3,521	3,521	3,521
Total Company Owned - LRZ 7	18,514	18,606	18,806	18,439
Total PPA/Contract - LRZ 7	2,740	2,754	2,712	2,711
Total Qualified Demand Response Resources including PRMUCAP - LRZ 7	882	948	1,023	1,081
Total LRZ 7 Planning Resources	22,136	22,308	22,541	22,231
Total Owned or Contracted Planning Resources - LRZ 7	22,910	23,044	23,272	22,960
LRZ 7 Resources Vs. MISO LCR (Line 7 - Line 2)	**1,285**	**1,457**	**1,690**	**1,380**
LRZ 7 Capacity Surplus (Shortfall) (Line 7 - Line 1)	**(270)**	**(98)**	**135**	**(175)**