

History of Buckeye/OREC

OREC Summer Conference

August 13, 2024

Who am I, and Why am I Talking about History?

- General Counsel –Buckeye/OREC
- Only third General Counsel for Buckeye Power and OREC -- following John King and Bob Mone
- Mentored under Bob Mone, who was outside General Counsel for Buckeye/OREC for many years from the 1960's to 2005
- Worked with Ohio Cooperatives for 26 years – from 1998 to present
- Associate and Partner at Thompson Hine for 20 years from 1998 to 2018
- General Counsel for Buckeye/OREC for 20 years -- 13 years as a partner at Thompson Hine from 2005 to 2018, and 7 years as an employee at Buckeye Power and OREC
- “Front Row Seat” to Cardinal/AEP transition years – 30 years from 1998 to 2028
- Sometimes, in order to figure out where you are going, it's first important to remember where you have been

The Light and the Power

- OREC commissioned a written history of the first 50 years of Ohio cooperatives, from 1935 to 1985, called “The Light and the Power”
- A lot has happened since 1985!

Cardinal/AEP Relationship

- Divided into three approximately 30-year periods
- Phase I -- Prior to Cardinal/AEP “Initial Years” (1935-1968)
- Phase II -- Cardinal/AEP “Golden Years” (1968-1998)
- Phase III -- Cardinal/AEP “Transition Years” (1998-2028)
- Post-Cardinal/AEP “Back to the Future” (2028+)

Phase I -- Prior to Cardinal/AEP “Initial Years” (1935-1968)

- Pre-OREC (1935-1941)
- OREC (1941-Present)
- Pre-Buckeye (1935-1959)
- Formation of Buckeye Power (1959)
- Negotiation of Cardinal Station arrangements (1960-1968)

Pre-OREC (1935-1941)

- Ohio electric cooperatives are originally formed as an Ohio nonprofit corporations operating as cooperatives
- Ohio electric cooperatives formed in the 1930's after passage of the REA Act in 1935

OREC (1941-Present)

- Ohio Farm Bureau provided early support to Ohio electric cooperatives
- In 1941, OREC was formed
- First office opened in 1952 on Indianola Avenue in Columbus
- Combined Buckeye/OREC headquarters moved to 6677 Busch Boulevard in 1974

Pre-Buckeye (1935-1959)

- Individual cooperative power contracts
- No certified service territories
- Eastern Ohio G&T formed in 1947
- Cooperative Power – Western Ohio G&T formed in 1949

Formation of Buckeye Power (1959)

- Eastern Ohio G&T and Cooperative Power G&T combine to form one Ohio G&T (Buckeye Power, Inc.)
- The Buckeye Blueprint --
 - Engineering and Economic Studies (1959)
 - Construction and Operation of Transmission (Future)
 - Power Generation (Start Studies 1959)
 - Financing (Start Studies 1959)
 - Negotiation of Power Contracts (Immediate)
 - Centralized Power Purchasing (When Advisable)
 - Cooperation with Munis (1959)
 - Elimination of IOU Exclusive Area Concept (1959)
 - Hiring of Power Specialist (When Needed – 1960)
 - Research with a particular focus on nuclear (When Needed)

Negotiation of Cardinal/AEP Relationship (1960-1968)

- Negotiations with AEP began in the early 1960's eventually resulting in the foundational agreements for Buckeye Power's flagship generation facility, the Cardinal Station, some of which are still in effect today
- Cardinal Station Agreement
- Power Delivery Agreement
- Indenture
- Wholesale Power Agreement
- Cardinal Units 1 and 2 (600 MW baseload coal each) commenced operations in 1967, and Buckeye purchased Cardinal Unit 2 from AEP in 1968
- Cardinal Unit 3 (600 MW baseload coal) commenced operations in 1977

Phase II -- Cardinal/AEP Relationship “Golden Years” (1968-1998)

- Cardinal/AEP Foundational Agreements (1968-1998)
- Highlights of Cardinal/AEP Relationship (1968-1998)

Cardinal/AEP Foundational Agreements (1968-1998)

- Cardinal Station Agreement (generation and joint ownership of Cardinal Station)
- Power Delivery Agreement (transmission agreement with Ohio transmission owners – no open access transmission)
- Indenture (private financing – no RUS financing initially)
- Wholesale Power Agreement (all-requirements contract with Buckeye members for Cardinal output -- 1966)
- Cardinal Unit Nos. 1 and Unit 2 go into service (1967)
- Cardinal Unit No. 3 goes into service (1977)
- Omega Site (1980) – site for additional coal generation acquired and permitted through OPSB
- Load management system (1973)

Highlights of Cardinal/AEP Relationship (1968-1998)

- “Golden Years”
- Arrangements locked in place for 30 years
- No other choices for generation or transmission
- Project financing – no financing under Indenture except additions to Cardinal Station
- No transmission rights except under PDA
- AEP operates and maintains Cardinal – provides all employees and technical support to Cardinal Operating Company
- No sources of power for the members except Cardinal Station Agreement
- No uses of Cardinal power except for the Buckeye members
- Capacity Bank arrangement (AEP purchases excess entitlement not needed then sells back when Buckeye power requirement exceeds Cardinal entitlement – extends arrangement past time Buckeye power requirement exceeds its Cardinal entitlement)
- Full, firm back-up power and supplementary power arrangement

Phase III -- Cardinal/AEP “Transition Years” (1998-2028)

- Acquisition of Additional Generation (1998-2009)
- Acquisition of Additional Generation (2010+)
- Open Access Transmission (2003)
- RTO's (2004)
- Ohio Electric Deregulation (2013)
- Transfer of Cardinal, Mone, Greenville Operational Responsibility (2018)
- Negotiation of End of Buckeye/AEP Cardinal (2022)

Acquisition of Additional Generation (1998-2009)

- With end of Cardinal capacity bank on the horizon, amend Indenture and CSA to allow acquisition and financing of other generation (1998)
- Cardinal capacity Bank expires (2006)
- Access to NYPA hydropower entitlement (55 MW) once Indenture and CSA amended
- Mone Station (500 MW of gas peakers) negotiation, construction and financing – AEP still constructs, operates, maintains, obtains fuel, and provides back-up, i.e. follows CSA model, but no capacity bank (1999-2002)
- AEP entitled to Mone output until Cardinal capacity bank expires – AEP entitlement to Mone output extended until 2015 after capacity bank expires
- Black start generators installed at Mone in 2014
- Mone Station transferred from NPC to Buckeye in 2019 after RUS debt repaid
- Greenville acquisition from DPL (200 MW of gas peakers) – AEP operates and maintains (2007)
- OVEC acquisitions (9% and 200 MW from Allegheny Power in 2004, and another 9% and 200 MW from FirstEnergy in 2009)
- Story Wind (30 MW PPA from 2008 to 2018)

Acquisition of Additional Generation (2010+)

- Community Solar 1.0 (2 MW total at multiple sites in 2017-2018)
- Community Solar 2.0 (2 MW PPA at single site in 2021)
- PURPA QF Distributed Generation Renewable Projects (~20 MW of biogas, landfill gas, solar and wind)
- Buckeye sells Omega Site (2018)
- Community Solar 1.0 projects transferred from NPC to Buckeye in 2023-2024
- Buckeye evaluates potential purchase of gas peakers (2023)
- Buckeye submits RUS New ERA application for solar and batteries (2024)

Open Access Transmission (2003)

- Power Delivery Agreement expired in 2003 – negotiated rate for transmission
- After expiration of PDA, Buckeye takes open access transmission from Ohio transmission owners, i.e. AEP, FirstEnergy, Duke and DPL
- Buckeye establishes delivery points with the Ohio TO's
- Buckeye members own the substations
- TO and PJM transmission rates filed with FERC
- Buckeye enters into a transmission joint ownership agreement with AEP in 2018 for up to \$100 million in Buckeye minority interests in AEP transmission projects to serve Buckeye members (AEP develops, operates and maintains)
- Buckeye members submit transmission facilities to PJM operational control and receive rate of return through Buckeye under Section 30.9 of AEP transmission tariff starting in 2018 – two Buckeye members have done so to date

RTO's (2004)

- PJM RTO (AEP and DPL join in 2004; Duke and FirstEnergy join in 2011 and 2012)
- FirstEnergy and Duke in MISO RTO from 2005 to 2012
- PJM Services Agreement – AEP manages Buckeye's load and resources in PJM from 2004 to 2017
- Buckeye generation and load included in AEP's PJM account
- AEP serves all Buckeye load, either using Buckeye resources (Cardinal and NYPA) or PJM LMP
- OVEC and Greenville in Buckeye's PJM account
- Termination of PJM Services Agreement -- Buckeye manages its own load and resources in PJM starting in 2018 coincident with elimination of AEP's Cardinal and Mone back-up power obligations
- Buckeye load removed from AEP's PJM account
- All Buckeye load and generation resources in Buckeye's PJM account, and Buckeye becomes PJM Load Serving Entity (LSE) on behalf of its members, and Generation Owner and market participant in PJM

Ohio Electric Deregulation (2013)

- In 2013, as part of the continued restructuring of the Ohio electric market, AEP spun off all of its Ohio competitive generation into an unregulated wholesale merchant affiliate, AEP Generation Resources (AEPGR)
- All of the Cardinal and Mone Station Agreements needed to be assigned from Ohio Power Company to AEPGR
- Took opportunity to clarify and update ownership of land and facilities at Cardinal and Mone – Amendment No. 12 to CSA
- After an unsuccessful effort to have Ohio continue to support (and obtain the corresponding benefit for Ohio ratepayers of) AEP's unregulated generation assets through a PPA Rider, AEPGR commenced efforts to sell or retire its Ohio generation assets, including Cardinal Unit 1
- As part of these efforts, in 2015, AEPGR agreed with Ohio regulators and with the Sierra Club to retire, repower or refuel Cardinal Unit 1 (and other AEPGR Ohio generation assets) by 2030

Transfer of Operational Responsibility for Cardinal, Mone and Greenville from AEP to Buckeye (2018)

- AEPGR did successfully sell or retire some of its Ohio generation assets
- However, after AEPGR was unsuccessful in selling its interest in Cardinal Unit 1, Buckeye and AEPGR commenced negotiations to transfer operational responsibility for Cardinal, Mone and Greenville from AEPGR to Buckeye
- Amendment No. 13 to Cardinal Station Agreement
- Termination of AEP's Cardinal Back-Up Obligation
- Termination of AEP's Mone Station Agreements and Mone Back-Up Obligation
- Buckeye takes back its 100% entitlement to Mone Units and Cardinal Units 2 and 3 output
- Termination of Greenville O&M Agreement with AEP
- Transition of Operational Responsibility for Cardinal, Mone, and Greenville from AEP to Buckeye
- Cardinal Plant operators become Cardinal Operating Company employees rather than AEP employees
- Buckeye provides most support services and oversight to Cardinal
- Cardinal Operating Company still owned and controlled 50/50 by Buckeye and AEP

Negotiation of End of Buckeye/AEP Cardinal Relationship (2022)

- Buckeye purchases Cardinal Unit 1 and most Cardinal property from AEP, including land and inventory
- Retirement of Cardinal Unit 3, instead of Cardinal Unit 1, and retirement by 2028 instead of by 2030 in order to avoid ELG investments (Sierra Club and PUCO agreement obtained)
- Amendment No. 14 to Cardinal Station Agreement
- AEP continues to take and pay for output of Cardinal Unit 1 through 2028
- Buckeye entitled to Cardinal Unit 1 output after 2028
- Units 1 and 2 provide back-up to each other through 2028
- AEP “leases” Unit 1 capital expenditures through 2028
- AEP and Buckeye retain historic environmental liabilities
- Buckeye takes over 100% ownership and control of Cardinal Operating Company, and Cardinal converts to nonprofit corporation

POST-CARDINAL/AEP “BACK TO THE FUTURE” (2028+)

Post-Cardinal/AEP (at 2028)

- Buckeye owns Cardinal Units 1 and 2
- Cardinal Unit 3 retired
- No other mandatory retirement obligations for Cardinal or OVEC (assumes current proposed EPA rules affecting coal-fired power plants are overturned on appeal or reversed by new President)
- AEP no longer entitled to any Cardinal output
- AEP/Buckeye still jointly responsible for landfills and asset retirement obligations at Cardinal
- Buckeye owns and operates Cardinal 1 and 2, Mone, Greenville, entitled to 18% of OVEC, NYPA, BTM community solar and renewable PPA's
- OVEC acquisition debt paid – any need for BPG?
- Continuing need for Cardinal Operating Company?
- RUS New ERA program solar and battery projects in service?
- Joint ownership of some transmission; rest open access
- Full PJM LSE and generation owner and market participant
- What next?

Post-Cardinal/AEP Relationship (after 2028)

- Existing resources likely still adequate capacity to meet member needs, economic and least cost for some period of time, absent significant new load growth (data centers), or mandated retirements or change in cost of operation as a result of regulatory requirements or legislation (EPA rules), but then what?
- New Owned Resources (gas, nuclear, renewables, batteries)?
- What to do with existing older owned resources, particularly coal, i.e. Cardinal and OVEC? When is it time to retire/replace with or without regulatory requirement?
- Short-Term Market Purchases?
- Longer-Term PPA's and Contracts?
- More transmission ownership?
- New partnerships and joint ownership for generation and/or transmission with AEP or others?
- Choices are wide open – back to 1959 -- “Back to the Future”
- Except experienced staff in place at Buckeye/OREC, and existing portfolio of generation resources in place with sunk costs, plus availability of PJM market
- But no longer any significant obligations/ties to AEP affecting any decisions that Buckeye might want to make

OREC Accomplishments

- Country Living Magazine (1958)
- RESCO (1961)
- Territorial Law (1978)
- Left out of Ohio deregulation and retail generation choice (but affected by it still)
- MARCS
- COLT program and facility

Wholesale Power Agreement

- 1963 – all-requirements 35 years
- 1966 – all-requirements 35 years for Cardinal project
- 1991 – amended and consolidated through 2025 (34 years)
- 2002 – extended to 2037 (35 years)
- 2008 – extended to 2057 (49 years)
- 2011 – Paulding-Putnam Indiana load added
- WPA currently has 33 years remaining on term
- Lenders will not finance beyond end of WPA term

Active Companies

- OREC, statewide trade association -- 1941
- Buckeye Power, generation and transmission – 1959
(successor to Cooperative Power and Eastern Ohio Power)
- Cardinal Operating Company, operator of Cardinal Power Plant -- 1967
- BPG, owner of OVEC entitlement -- 2004
- Community Foundation -- 2016
- PACs

Historic Companies

- NPC – dissolved in 2024
- BPG II – dissolved in 2023
- RESCO – dissolved in 2019; warehouse operations transferred to KAEC
- Cooperative Power --- dissolved in 2013 after Omega Site transferred to Buckeye; Omega site later sold by Buckeye
- Eastern Ohio Cooperative Power – dissolved in 1980
- Buckeye Member Service Company – dissolved in 2004
- Ohio Rural Electric Sales Corporation – dissolved in 2010
- Buckeye Fuel Company – dissolved in 2003
- Buckeye Electric Utility Company – dissolved in 1997 after load management assets transferred to Buckeye Power
- Buckeye Member Cooperative – changed to Buckeye Member Service Company in 1991

Affiliates

- OVEC – owner and operator of Kyger Creek and Clifty Creek Coal Plants; Buckeye has 3 seats on OVEC Board
- ACES Power Marketing – formed in 1999; Buckeye one of the four founding members
- NRECA
- NRCO
- PJM
- MISO

Timeline (1930's to 1960's)

- 1930's – Distribution cooperatives formed as Ohio nonprofits
- 1941 – OREC formed
- 1947 – Eastern Ohio Cooperative Power formed
- 1949 – Cooperative Power formed
- 1955 – Ohio Rural Electric Sales Corporation(ORESC) formed
- 1958 – Country Living Magazine started by OREC
- 1959 – Cooperative Power and Eastern Ohio Cooperative merged to form Buckeye Power
- 1960's – Cardinal Station arrangements negotiated with AEP
- 1961 – Rural Electric Supply Cooperative formed
- 1963 – Wholesale Power Agreement

Timeline (1960's to 1970's)

- 1966 – Wholesale Power Agreement for Cardinal
- 1967 – Cardinal Operating Company formed
- 1968 – Cardinal Station Agreement, Indenture, Power Delivery Agreement, Cardinal 1 and 2
- 1973 – Buckeye Electric Utility Company formed; load management system developed
- 1974 – Headquarters moved to 6677 Busch Boulevard
- 1975 – Buckeye Fuel Company formed
- 1977 – Cardinal 3 goes into service
- 1978 – Territorial law passed
- 1979 – Buckeye Member Cooperative formed

Timeline (1980's to 2000's)

- 1980 – Cooperative Power formed; Omega site acquired for future generation
- 1991 – Wholesale Power Agreement amended and consolidated; extended to 2025
- 1991 – Buckeye Member Cooperative becomes Buckeye Member Service Company
- 1997 – BEUC dissolved; load management system transferred to Buckeye Power
- 1999 – ACES Power Marketing formed
- 1999 – NPC formed to build Mone Station
- 2000 – Mone Station Agreements
- 2002 – Wholesale Power Agreement extended to 2037
- 2002 – Mone Station operational
- 2003 – Power Delivery Agreement expires; open access begins
- 2003 – Buckeye Fuel Company dissolved
- 2003 – Arch Coal Buydown
- 2004 – Buckeye joins PJM; enters into PJM Services Agreement
- 2004 – BPG formed; first 9% of OVEC acquired

Timeline (2000's to 2010's)

- 2006 – Cardinal capacity bank expires
- 2007 – Greenville acquired
- 2007 – Partnership with Marion Tech for COLT training
- 2008 – Wholesale Power Agreement extended to 2057
- 2008 – Story Wind PPA starts
- 2009 – OREC enters into MARCS arrangement
- 2009 – Second 9% of OVEC acquired
- 2010 – Buckeye Member Service Company dissolved
- 2011 – Buckeye serves Paulding-Putnam Indiana load
- 2013 – AEP corporate separation – Amendment 12 to CSA
- 2013 – Omega site transferred to Buckeye; Cooperative Power dissolved
- 2014 – Black start generators at Mone
- 2014 – Partnership with Marion Tech ends; OREC takes over COLT training
- 2015 – Mone Station Agreement Secondary Term begins

Timeline (2010's to 2020's)

- 2016 – COLT field purchased and COLT indoor training facility constructed
- 2016 – Community Foundation formed
- 2018 – PJM Services Agreement ends
- 2018 – Community Solar 1.0
- 2018 – Buckeye takes over operational control at Cardinal, Mone and Greenville; back-up arrangements end; full entitlement from Mone and Cardinal 2 and 3 – Amendment 13 to CSA
- 2018 – Buckeye enters into transmission joint ownership agreement with AEP
- 2018 – Buckeye sells Omega site
- 2019 – Story Wind PPA expires
- 2019 – Mone Station transferred to Buckeye
- 2019 – RESCO dissolved; warehouse operations transferred to KAEC
- 2021 – Community Solar 2.0 PPA
- 2022 – Buckeye purchases Cardinal 1 from AEPGR; Amendment 14 to CSA
- 2023 – BPG II dissolved
- 2024 – NPC dissolved – Community Solar 1.0 transferred to Buckeye

QUESTIONS?