Call to Order
Roll Call

1. **CONSENT AGENDA:** The following agenda item(s) will be considered as a group by the Committee and will be enacted with one motion. There will be no separate discussion of these item(s) unless a Committee Member requests, in which event the agenda item(s) will be removed from the Consent Agenda and considered as a separate item .......................................................... CHAIRMAN MARIO HERRERA

   - Request for approval of the minutes for the meeting of March 21, 2023.

2. **Appointment of Trapper Mining, Inc. SRP Representatives** .......... BOBBY OLSEN

   Request for approval to appoint John Coggins, Pam Syrjala, and Craig Larson to serve on Trapper Mining, Inc.’s Board of Directors and its subsidiaries.

3. **Hydrogen Technology Update** ............... HANK COURTRIGHT and TOM ACKER

   Informational presentation regarding an update on hydrogen technologies and a regional hydrogen hub proposal for a Department of Energy grant opportunity.

4. **Closed Session, Pursuant to A.R.S. §30-805(B), for the Committee to Consider Matters Relating to Competitive Activity, Including Trade Secrets or Privileged or Confidential Commercial or Financial Information, with Respect to the SRP Self-Build Resource Option to be Compared with Responses to the All-Source Request for Proposals and an Update on the Siting Process for This Self-Build Resource** ......................... BILL McCLELLAN

5. **Closed Session, Pursuant to A.R.S. §30-805(B), for the Committee to Consider Matters Relating to Competitive Activity, Including Trade Secrets or Privileged or Confidential Commercial or Financial Information, with Respect to a Request for Approval of the Sale of Power to the City of Mesa** .......................................................................................................... PAM SYRJALA

6. **Report on Current Events by the General Manager and Chief Executive Officer or Designees** ................................................................. MIKE HUMMEL

7. **Future Agenda Topics** ................................................................. CHAIRMAN MARIO HERRERA
The Committee may vote during the meeting to go into Executive Session, pursuant to A.R.S. §38-431.03 (A)(3), for the purpose of discussion or consultation for legal advice with legal counsel to the Committee on any of the matters listed on the agenda.

The Committee may go into Closed Session, pursuant to A.R.S. §30-805(B), for records and proceedings relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information.

Visitors: The public has the option to attend in-person or observe via Zoom and may receive teleconference information by contacting the Corporate Secretary’s Office at (602) 236-4398. If attending in-person, all property in your possession, including purses, briefcases, packages, or containers, will be subject to inspection.

THE NEXT POWER COMMITTEE MEETING IS SCHEDULED FOR THURSDAY, MAY 25, 2023

04/13/2023
A meeting of the Power Committee of the Salt River Project Agricultural Improvement and Power District (the District) convened at 9:30 a.m. on Tuesday, March 21, 2023, from the Board Conference Room at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona. This meeting was conducted in-person and via teleconference in compliance with open meeting law guidelines. The District and Salt River Valley Water Users’ Association (the Association) are collectively known as SRP.

Committee Members present at roll call were M.J. Herrera, Chairman; K.B. Woods, Vice Chairman; and R.C. Arnett, N.R. Brown, K.J. Johnson, K.L. Mohr-Almeida, and S.H. Williams; and Association Board of Governors observer L.D. Rovey.


In compliance with A.R.S. §38-431.02, Andrew Davis of the Corporate Secretary’s Office had posted a notice and agenda of the Power Committee meeting at the SRP Administration Building, 1500 North Mill Avenue, Tempe, Arizona, at 9:00 a.m. on Friday, March 17, 2023.

Chairman M.J. Herrera called the meeting to order.

**Consent Agenda**

Chairman M.J. Herrera requested a motion for Committee approval of the Consent Agenda, in its entirety.

On a motion duly made by Board Member S.H. Williams and seconded by Board Member K.J. Johnson, the Committee unanimously approved and adopted the following item on the Consent Agenda:

- Minutes of the Power Committee meeting on February 23, 2023, as presented
Corporate Secretary J.M. Felty polled the Committee Members on Board Member K.J. Johnson’s motion to approve the Consent Agenda, in its entirety. The vote was recorded as follows:

**YES:** Board Members M.J. Herrera, Chairman; K.B. Woods, Vice Chairman; R.C. Arnett, N.R. Brown, K.L. Mohr-Almeida, K.J. Johnson, and S.H. Williams (7)

**NO:** None (0)

**ABSTAINED:** None (0)

**ABSENT:** None (0)

**EPRI Advanced Nuclear Update**

Using a PowerPoint presentation, Steve Chengelis, Director of Future Fleet of EPRI, stated that the purpose of the presentation was to provide information regarding emerging advanced nuclear energy generation technologies. He said that nuclear electricity began in 1951 with Experimental Breeder Reactor I (EBRI-I), reached commercial criticality in 1858 at shipping ports, and accelerated to more than 400 reactors worldwide by 1990.

Mr. S. Chengelis stated that nuclear electricity growth plateaued after the 1990s and in order to reach net-zero by 2050, more than 250 Gigawatts (GW) of new nuclear capacity would be needed, amounting to over 1,800 new Advanced Reactors (ARs) at 300 Megawatts of electricity (MWe). He provided a chart from 2005 projected to 2075 regarding the role of nuclear electricity capacity in meeting U.S. climate goals and stated that ARs integrate better with renewable energy and improve the utilization of secured energy resources.

Mr. S. Chengelis described the different types of reactors as follows: water-cooled reactors, fast reactors, molten salt reactors, high-temperature gas-cooled reactors, and microreactors. He described tiers one through three used in Advanced Reactor Demonstration Projects (ARDP).

Mr. S. Chengelis said that Advanced Nuclear Technology (ANT) programs focus on accelerating the deployment of nuclear power around the world. He stated that more than 80 companies make up the broadest advanced nuclear collaboration and currently has over 40 ongoing projects with over 200 past products. He defined Nuclear Beyond Electricity (NBE) as enabling existing and future nuclear plants to participate in energy markets beyond the practice of generating baseload electricity and including the following markets: flexible electric grid, low carbon fuels, process manufacturing, district energy, data centers, and water and wastewater.

Mr. S. Chengelis concluded with a discussion of existing coal plants transitioning to advanced nuclear plants and key takeaways.

Mr. S. Chengelis responded to questions from the Committee.
Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary’s Office and, by reference, made a part of these minutes.

Mmes. A.N. Bond-Simpson, C.M. Hallows, and J.R. Schuricht; and Mr. R.T. Judd entered the meeting during the presentation.

**Coronado Generating Station (CGS) Transition Studies**

Using a PowerPoint presentation, Kathleen A. Munroe, SRP Senior Principal Project Origination Consultant, stated that the purpose of the presentation was to provide information regarding the Coronado Repurposing Study and the Gateway for Accelerated Innovation in Nuclear (GAIN) Study.

Ms. K.A. Munroe stated that SRP is conducting studies with Arizona State University (ASU) Seidman Research Institute, Kiewit, Rounds Consulting Group, and Department of Energy GAIN with respect to SRP transitioning its coal community and repurposing CGS. She said that Kiewit’s study report regarding repurposing CGS identified technologies most promising and screened technologies suitability for the site. Ms. K.A. Munroe said that Phase 1 of the CGS repurposing involves screening the following technologies: solar, wind, biomass, battery storage, and long duration energy storage with an anticipated decision by 2028; and Phase 2 involves advanced nuclear technology with a date to be determined.

Ms. K.A. Munroe provided an overview of progress to date and the GAIN Study site assessment, technology screening, and economic impact analysis. She concluded with a discussion of next steps and key takeaways.

Ms. K.A. Munroe responded to questions from the Committee.

Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary’s Office and, by reference, made a part of these minutes.

Council Chairman T.M. Francis; Council Member N.J. Vanderwey; Mr. C.N. Hunter; and Steve Chengelis and Matt O’Connor of EPRI left the meeting during the presentation. Ms. E.J. Roelfs entered the meeting during the presentation.

**Integrated System Plan (ISP) Update**

Using a PowerPoint presentation, Angie N. Bond-Simpson, SRP Director of Integrated System Planning and Support, stated that the purpose of the presentation was to provide information regarding progress on the ISP analytical process and community stakeholder engagement.

Ms. A.N. Bond-Simpson described SRP’s ISP vision as “planning a future system (2025-2035) that will enable us to achieve or exceed our 2035 goals with the highest
customer value.” She said that the ISP study plan takes into account the following scenarios: desert contraction, current trends, strong climate policy, and desert boom.

Ms. A.N. Bond-Simpson compared peak load forecasts to energy demand forecasts from 2025 to 2035. She said that SRP continues to reflect on uncertainties in energy demand impacts through scenario analysis which results in understanding how customer programs are impacted. Ms. A.N. Bond-Simpson explained how the distribution system lens provides SRP with historical and consistent growth rates that align with ISP scenario forecasts. She discussed the increasing pace on the bulk system and strategic approaches with respect to bulk system transformation.

Ms. A.N. Bond-Simpson reviewed the preliminary results of technology neutral current trends and minimum coal with a 2035 coal exit. She reviewed technical, customer, and community inputs and stated that system strategies are the key points of focus, and that SRP management will make a recommendation to the Board for planning and operating the power system through 2035.

Ms. A.N. Bond-Simpson concluded with a discussion of key takeaways and next steps.

Ms. A.N. Bond-Simpson responded to questions from the Committee.

Copies of the PowerPoint slides used in this presentation are on file in the Corporate Secretary’s Office and, by reference, made a part of these minutes.

Zach Nelson of Balanced Rock Power left the meeting during the presentation.

Closed Session: Modify Terms to Solar Power Purchase Agreements

Chairman M.J. Herrera called for a closed session for the Power Committee at 10:54 a.m., pursuant to A.R.S. §30-805(B), to consider matters relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information, with respect to a request for approval to modify the terms under which SRP may enter into 1) an Amendment of an existing 400 Megawatt (MW) Solar Power Purchase Agreement and 2) enter into a new Power Purchase Agreement for 394 MW of solar energy.

Ms. J.R. Schuricht; Eliasid Animas of Stratagen; Nikos Bountas of Strata Clean Energy; Ian Calkins of Copper State Consulting Group; Ryan Randazzo of The Arizona Republic; and Collin Thomas of Triple Oak Power left the meeting.

The Committee reconvened into open session at 11:00 a.m. with the following Members and other present: President D. Rousseau; Association Vice President J.R. Hoopes; Board Members R.C. Arnett, N.R. Brown, M.J. Herrera, K.J. Johnson, A.G. McAfee, K.L. Mohr-Almeida, M.V. Pace, L.D. Rovey, P.E. Rovey, J.M. White Jr., L.C. Williams, S.H. Williams, and K.B. Woods; Council Vice Chairman J.R. Shelton; Council Liaison

Closed Session: Future Generation Resources Siting

Chairman M.J. Herrera called for a closed session for the Power Committee at 11:01 a.m., pursuant to A.R.S. §30-805(B), to consider matters relating to competitive activity, including trade secrets or privileged or confidential commercial or financial information, with respect to future generation resources, siting such resources, and as follow-up to previously closed session presentations provided to the Power Committee and Board.


Report on Current Events by the General Manager and Chief Executive Officer or Designees

Mike Hummel, SRP Associate General Manager and Chief Executive Officer, reported on a variety of federal, state, and local topics of interest to the Committee.

Messrs. B.J. McClellan, B.A. Olsen, and G.M. Smedley left the meeting during the report. Ms. J.R. Schuricht; Eliasid Animas of Stratagen; Nikos Bountas of Strata Clean Energy; Ian Calkins of Copper State Consulting Group; Ryan Randazzo of The Arizona Republic; and Collin Thomas of Triple Oak Power entered the meeting during the report.

Future Agenda Topics

Chairman M.J. Herrera asked the Committee if there were any future agenda topics. None were requested.
There being no further business to come before the Power Committee, the meeting adjourned at 11:25 a.m.

John M. Felty
Corporate Secretary
Appointment of SRP Representatives to Trapper Mining, Inc. Board

Bobby Olsen | Power Committee

04/20/2023
Background on Trapper Mining, Inc.

- Trapper Mine is located near Craig, CO adjacent to the Craig Generating Station.
- Formed by Utah International in the mid-1950’s, the mine was purchased by SRP, Tri-State, PacifiCorp, and Platte River in 1983.
- In 1997, Trapper Mining, Inc. was converted to a not-for-profit coal cooperative.
- In Dec 2020, Tri-State exited from Trapper ownership.
- Today, Trapper Mine provides subbituminous coal via truck to Craig Station for use in Units 1 & 2.

<table>
<thead>
<tr>
<th>Owner</th>
<th>% Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP</td>
<td>43.72</td>
</tr>
<tr>
<td>PacifiCorp</td>
<td>29.14</td>
</tr>
<tr>
<td>Platte River Power Authority</td>
<td>27.14</td>
</tr>
</tbody>
</table>
Governance

- Trapper Mining, Inc. is governed by a 7 member Board
- Each entity nominates and appoints its own Board members
- Board members also serve on the board for subsidiaries of Trapper Mining, Inc.
  - Williams Fork Land Company
  - Williams Fork Mining Company
- Board members cast a number of votes reflecting their pro-rata ownership share and allocated Board seats

<table>
<thead>
<tr>
<th>Owner</th>
<th>Board Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRP</td>
<td>3</td>
</tr>
<tr>
<td>PacifiCorp</td>
<td>2</td>
</tr>
<tr>
<td>Platte River Power Authority</td>
<td>2</td>
</tr>
</tbody>
</table>
Recommendation

- In accordance with the terms discussed herein, management requests that the Committee recommend that the Board approve the appointment of the following individuals to represent SRP on the Board of Trapper Mining, Inc., and the Boards of any subsidiaries of Trapper Mining, Inc.:

  - John Coggins, Associate General Manager and Chief Power System Executive
  - Pam Syrjala, Director Supply & Trading and Fuels
  - Craig Larson, Director Coronado Generating Station
thank you!
Agenda

• Why Hydrogen?
• Hydrogen Fundamentals
  • The Colors of Hydrogen
  • Production / Delivery / Storage
• Applications for Hydrogen Use
• DOE Hydrogen Hub Application
  • The Center for an AZ Carbon-Neutral Economy (AZCaNE)
  • Southwest clean Hydrogen Innovation Network (SHINe)
  • Proposed Projects in AZ and NV
Why Hydrogen? Carbon Reduction Role?

**Natural Gas replacement** – as a primary fuel, or blended fuel, for power generation, building heating and industrial processes

**Petroleum replacement in transportation** – to power fuel cells with electric drive

**Energy storage** – seasonal storage at large scale for multiple applications

Graphic Source: EPRI/GTI
The Colors of Hydrogen

Gray – natural gas steam methane reforming (SMR)

Brown – coal gasification

Blue – natural gas or coal with carbon capture sequestration/utilization

Green – water electrolysis with renewable electricity (or bioresources based)

Pink – water electrolysis using nuclear electricity

White – water electrolysis using grid power

<table>
<thead>
<tr>
<th>Hydrogen Production Methodology</th>
<th>Carbon Impact (kg CO₂/kg H₂)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray: Natural gas SMR</td>
<td>8-12</td>
</tr>
<tr>
<td>Brown: Coal Gasification + SMR</td>
<td>18 -20</td>
</tr>
<tr>
<td>Blue: Natural Gas SMR + Carbon Capture</td>
<td>0.6 - 3.5</td>
</tr>
<tr>
<td>Green: Electrolysis with Renewable Electricity</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: GREEN HYDROGEN GUIDEBOOK
Heavy Duty Transportation
Hydrogen - Power Plant Implications for SRP

SRP is upgrading CT combustors for flexibility – allows blends up to 40-60% H₂

- Installed:
  - Desert Basin 1
  - Gila River Block 1
  - Mesquite Block 1
  - Santan 5
- Plans for 6 additional SRP units
- Coolidge LM 6000's can burn 30% blends
- Costs of ~$5 million per unit

OEMs anticipate 100% H₂ flexible CTs in the 2030-2040
H₂ Storage – Underground Options in AZ

Salt Dome Cavern

Salt Dome Caverns

Not to Scale
Projects to Follow…

**Intermountain Power Project (IPP) - LADWP**
- World’s first combined cycle using green H₂
- Commercial operation 2025 on 30% H₂
- Increasing over time (~2040) to 100% H₂

**Advanced Clean Energy Storage (ACES) Project**
- World’s largest green hydrogen storage project
- Supports “hard to electrify” heavy transport & industrial applications
Infrastructure Investment and Jobs Act – Hydrogen

Includes $9.5B for clean hydrogen

- $1B for electrolysis RD&D
- $500M manufacturing and recycling R&D
- $7B for 6 to 10 regional clean hydrogen hubs across US
THE CENTER FOR AN ARIZONA CARBON-NEUTRAL ECONOMY AT ASU
Southwest clean Hydrogen Innovation Network

**SHINE**

*SHINE* is a unique consortium of public, private, and tribal organizations working across Arizona and Nevada to produce, store, deliver, and use clean hydrogen (H₂), with connectivity to the Southwest and the broader U.S. clean H₂ ecosystem.
# SHINe Participating Organizations

<table>
<thead>
<tr>
<th>MAKE</th>
<th>LIQUEFY</th>
<th>STORE</th>
<th>MOVE</th>
<th>REFUEL</th>
<th>USE</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Utilities</th>
<th>Universities</th>
<th>Tribal, State, &amp; Local Government</th>
<th>Investors</th>
<th>Network Connectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona Public Service Salt River Project Southwest Gas Tucson Electric Power</td>
<td>Arizona State University Northern Arizona University University of Arizona University of Nevada Las Vegas</td>
<td>Arizona Commerce Authority City of Phoenix Las Vegas Global Economic Alliance Navajo Nation Sustainable Cities Network</td>
<td>Confidential</td>
<td>Electric Power Research Institute Arizona Solar Energy Industries Association SidePorch Consulting LLC</td>
</tr>
</tbody>
</table>
### SHINe Participating Organizations

#### MAKE
- 174 Power Global Corp.
- Air Liquide
- Ameresco
- Element Resources
- First Mode
- Heliogen
- Hyve 1
- Linde Inc.
- NextEra Energy Resources LLC
- Nikola Corporation
- Origis Energy

#### LIQUEFY
- 174 Power Global Corp.
- Air Liquide
- Linde Inc.

#### STORE
- Element Resources
- Linde Inc.
- Phoenix Hydrogen
- Vopak New Energies

#### MOVE
- Air Liquide
- EDF Renewables
- Linde Inc.
- Nikola Corporation
- Origis Energy
- Tallgrass Greenview
- Vopak New Energies

#### REFUEL
- First Mode
- Nikola Corporation
- Pilot
- Trillium

#### USE
- American Airlines
- City of Phoenix
- First Mode
- Freeport McMoRan
- Nikola Corporation
- Regional Transportation Commission of Southern Nevada
- Tallgrass Greenview
- ZeroAvia

#### Utilities
- Arizona Public Service
- Salt River Project
- Southwest Gas
- Tucson Electric Power

#### Universities
- Arizona State University
- Northern Arizona University
- University of Arizona
- University of Nevada Las Vegas

#### Tribal, State, & Local Government
- Arizona Commerce Authority
- City of Phoenix
- Las Vegas Global Economic Alliance
- Navajo Nation
- Sustainable Cities Network

#### Investors
- Confidential
- Electric Power Research Institute
- Arizona Solar Energy Industries Association
- SidePorch Consulting LLC
SHINe Project
“Clusters”
SRP is taking steps to prepare for utilizing hydrogen.

DOE Hydrogen Hub funding will “jump-start” a national hydrogen ecosystem and infrastructure.

Power generation probably post-2035 to allow technology and infrastructure development.

SRP will be engaged with SHINe to assess and guide H2 for power generation.
thank you!