
# KEEP ES TWG Ballot – Catalog Results
# October 23, 2008

| Option No. | GHG Reduction Policy Option | Number of Ballots for Option | Comments from TWG Members |
|---|---|---|---|
| **ES-1** | **EMISSIONS POLICIES AND OVERARCHING ITEMS** | | |
| 1.0 | Overarching Items | **0** | |
| 1.1 | GHG Cap and Trade | **5** | • Multisector cap and trade?<br>• Will likely happen through MGA or a federal program<br>• Good idea but this needs to be federal program |
| 1.2 | Carbon/GHG Tax | **2** | • Variation on ES-1.1? |
| 1.3 | Generation Performance Standards and/or Mitigation Requirements for Electricity | **3** | • ES-1.3 and ES-4.4 are similar in nature. |
| 1.4 | Integrated Resource Planning (IRP) | **2** | |
| 1.5 | Voluntary GHG Reduction Commitments | **1** | |
| 1.6 | Technology Research and Development | **6** | • Could be confused with ES-4.5 |
| **ES-2** | **RENEWABLE ENERGY** | | |
| 2.1 | Renewable Portfolio Standard (RPS) | **11** | • Renewable energy is critical to help bridge the gap for safer, more efficient technologies of the future. Incentives and goals should be carefully considered.<br>• Tied to ES-2.6 and ES-7.1<br>• Combine with ES-3.1-3.3 |
| 2.2 | Grid-Based Renewable Energy Regulations, Incentives and/or Barrier Removal | **3** | |
| 2.3 | Distributed Renewable Energy Incentives and/or Barrier Removal | **3** | |

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| 2.4 | Green Power Purchases and Marketing | **6** | • Combine with ES-8.1<br>• Received medium potential reduction at medium cost in notional rating exercise. |
| 2.5 | Pricing Strategies to Promote Renewable Energy (e.g., Net Metering) | **2** | |
| 2.6 | Remove Barriers to Development of Renewable Energy (Zoning, Siting, etc.) | **1** | |
| 2.7 | Technology-Focused Initiatives (Biomass Co-Firing, Energy Storage for Renewable Energy Generation, Fuel Cells, etc.), Including Grant Programs | **7** | |
| 2.8 | Research and Development for Renewable Technologies | **5** | • Combine with ES-2.7 |
| 2.9 | Explore Opportunities for Utility-Scale Solar Thermal Technologies | **0** | |
| **ES-3** | **ENERGY EFFICIENCY** | | |
| 3.1 | Energy Efficiency Resource Portfolio Standard | **6** | • 3.1 – 3.3 (regarding EE standards/incentives) are related. Some utility-scale policies currently under review through KCC.<br>• Demand-side?<br>• Combine with ES-2.1 and 3.3 and 3.2 |
| 3.2 | Utility Energy Efficiency Incentives or Other Barrier Removal | **5** | • Same as ES-3.1 and ES-3.3<br>• Combine with ES-2.1 and 3.1 and 3.2 |
| 3.3 | Consumer Energy Efficiency Incentives or Other Barrier Removal | **4** | • Received H/M on reduction potential and lower cost. Might already be addressed in RCI.<br>• Combine with ES-2.1 and 3.1 and 3.2 |
| 3.4 | Combined Heat and Power (CHP) Incentives and/or Barrier Removal | **3** | • A narrower view of ES-3.6 |

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| 3.5 | Public Benefits Charge | **1** | |
| 3.6 | Co-Location or Integration of Energy-Producing Facilities | **4** | |
| 3.7 | Use Compressed Air Energy Storage Systems | **1** | • Storage of Wind energy directly would potentially be beneficial. |
| **ES-4** | **FOSSIL FUEL AND NUCLEAR ELECTRICITY** | | |
| 4.1 | Advanced Fossil Fuel Technology (e.g., IGCC, CCSR, Advanced Pulverized Coal, CFB) Incentives, Support, or Requirements | **17** | • Should include CCSR |
| 4.2 | New Nuclear Capacity | **15** | • Combine with ES-4.3 |
| 4.3 | Relicensing/Up-rating Existing Nuclear Power | **3** | • This is very important to maintain the current energy supply, but it cannot provide a significant additional energy resource. Many of these resources already operate at greater than 100% capacity factors.<br>• Combine with ES-4.2 |
| 4.4 | Efficiency Improvements and Repowering<br>Existing Plants | **5** | • This is important on a case-by-case basis, but plant efficiency is determined by the original design of the facility. It is unlikely that a design can be significantly altered or improved. Again repowering does not add substantially to any new capacity at an existing unit.<br>• 1.3 and 4.4 are similar in nature. |
| 4.5 | Technology-Focused Initiatives | **2** | |
| **ES-5** | **FUEL PRODUCTION, PROCESSING, AND DELIVERY** | | |
| 5.1 | Oil and Gas Production: GHG Emission Reduction Incentives, Support, or Requirements | **0** | |
| 5.2 | Natural Gas Transmission and Distribution | **1** | |

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| 5.3 | Oil Refining: GHG Emission Reduction Incentives, Support, or Requirements | **1** | |
| 5.4 | Coal Production**:** GHG Emission Reduction, Incentives, Support, or Requirements | **0** | |
| 5.5 | Coal-to-Liquids and Gas-to-Liquids Production**:** GHG Emission Reduction Incentives, Support, or Requirements | **0** | |
| 5.6 | Low-GHG Hydrogen Production Incentives and Support | **0** | |
| 5.7 | Enhanced Oil Recovery | **0** | |
| **ES-6** | **CARBON CAPTURE AND STORAGE OR REUSE POLICIES AND BARRIER REMOVAL** | | |
| 6.1 | CCSR Incentives, Requirements and/or Enabling Policies (Administration, Regulation, Liability, Incentives) | **11** | • Suggest that we segregate carbon capture and carbon sequestration. While a CO2 reduction strategy could include both they will develop along separate paths.<br>• State must take lead to remove barriers<br>• This could include ES-6.3 |
| 6.2 | R&D for CCSR | **7** | • Suggest that we segregate carbon capture and carbon sequestration. While a CO2 reduction strategy could include both they will develop along separate paths.<br>• Focus on KS, includes EOR and algea |
| 6.3 | Use $CO_2$ for Enhanced Oil Recovery | **2** | • This a quasi-carbon sequestration notion<br>• Potential bridge to CCS<br>• May not all be sequestered. Still has potential. |
| **ES-7** | **OTHER ENERGY SUPPLY OPTIONS** | | |
| 7.1 | Transmission System Upgrading | **14** | • Transmission is a critical component for future wind expansion. |

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| | | | • Should include SmartGrid (ES-7.8)<br>• Combine with ES-7.2<br>• Required for more wind |
| 7.2 | Reduction of Transmission and Distribution Line Losses | **2** | • This notion is likely to be fraught with unreasonable expectations.<br>• Combine with ES-7.1<br>• Westar Study indicates moving from 345kV to 765kV lines can reduce line losses by 4%. Could be large reductions but costly. |
| 7.3 | General Distributed Generation Support (Interconnection Rules, Net Metering, etc.) | **1** | • Combined with net metering rules |
| 7.4 | Environmental/GHG Emissions Disclosure | **1** | • Combine with 8.1 |
| 7.5 | Landfill Gas Recovery | **1** | |
| 7.6 | Waste to Energy | **1** | • Would include ES-7.5 |
| 7.7 | $N_2O$ Reduction Co-Benefit | **0** | |
| 7.8 | Smart Grid Systems | **4** | |
| 7.9 | Consider Expanded Hydroelectric Power Opportunities | **1** | • This has little potential in Kansas. |
| **ES-8** | **EDUCATION AND OUTREACH** | | |
| 8.1 | General Education to Public on Energy Supply Options | **5** | |
| 8.2 | Work Force Development Education to Support Energy Supply Options and Economic Development | **5** | |