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| 3 | 2007 | X | X | | X | | | |
| 4 | 2008 | X | X | | | | | |
| 5 | 2009 | X | X | | | | X | |
| 6 | 2010 | X | X | X | X | X | X | |
| 8 | **COMMENTS FROM DON SPARKS:** | | | | | | | |
| 9 | **The following areas are of importance:** | | | | | | | |
| 10 | Unconventional Resource | | | | | X | | |
| 11 | 1. Resource Assessment | | | | | X | | |
| 12 | a. Resource assessment (p. 28) | | | | | X | | |
| 13 | b. Geosciences (p. 28) | | | | | X | | |
| 14 | c. Basin Analysis & Resource Exploitation (p. 29) | | | | | X | | |
| 15 | 2. Early Stage Research or novel concepts.... (p. 30) | | | | | X | | |
| 16 | 3. Develop and execute innovative approaches .....(p. 30) | | | | | X | | |
| 17 | Drilling/completion/water management | | | | | X | | |
| 18 | d) drilling (p. 29) | | | | | X | | |
| 19 | e) stimulating and completion (p. 29) | | | | | X | | |
| 20 | f) water managment (p. 29) | | | | | X | | |
| 21 | i) environmental (p. 30) | | | | | X | | |
| 22 | Small Producers | | | | | X | | |
| 23 | 1. Methods to reduce field operating costs | | | | | X | | |
| 24 | Water Managment (p. 36) | | | | | X | | |
| 25 | Reducing production related costs (p. 36) | | | | | X | | |
| 26 | Cost effective intelligent well monitoring (p. 36) | | | | | X | | |
| 27 | Creative capture & reuse of industrial waste (p. 37) | | | | | X | | |
| 28 | 2. Methods to increase oil and gas recovery | | | | | X | | |
| 29 | How to extend economic life (p. 36) | | | | | X | | |
| 30 | Improved methods for well completions (p. 36) | | | | | X | | |
| 31 | Leverage existing wellbores to maximize additional hydrocarbons (p. 37) | | | | | X | | |
| 32 | Novel concepts to increase production (p. 37) | | | | | X | | |

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| 33 | | | | | | | | |
| 34 | **COMMENTS FROM SANDRA MARK:** | | | | | | | |
| 35 | **General comments:** | | | | | | | |
| 36 | For many of the technology areas, the term shale gas is too restrictive. | | | | | | X | |
| 37 | There is a need for research on oil shales, and we still have not figured out tight sands (both oil and gas). | | | | | | X | |
| 38 | For virtually every instance, I would do a search (shale gas) and replace with "oil and gas shales and tight sands." | | | | | | X | |
| 39 | So the DOE has been spending lots of money to help figure out how to produce gas from the Piceance, even as the industry is running away screaming because of environmental restrictions there. | X | | | | | | |
| 40 | Another example--there are lots of deals out there right now, and most companies I know aren't even looking at those on Federal lands. I believe that we need to keep reminding the DOE and politicians of these sorts of problems. | X | | | | | | |
| 41 | | | | | | | | |
| 42 | **Specific comments:** | | | | | | | |
| 43 | Page 25. Frontier Area, Frontier category. Confusing text, and is it 10 or 15%? It probably needs to be higher, whichever it is. | | | | | X | | |
| 44 | Page 29, e iii. I couldn't find anyone that knows what "domain stimulation" methods means. | | | | | X | | |
| 45 | Page 32. The big hole in Drilling projects bothers me. Surely there is need for research. I'd like to see what projects the PAC thought were "not a critical as needs in other areas". A few come to mind, that would also be of special interest to small producers: | | | | | X | | |

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| 46 | Pushing the limits of coiled tubing. | | | | | X | | |
| 47 | Drilling horizontal wells with coiled tubing (difficult to steer) | | | | | X | | |
| 48 | Is there really an economic benefit of coiled tubing versus a big drilling program with conventional (with economies of scale)? | | | | | X | | |
| 49 | These topics are important, seem to be missing: | | | | | | | |
| 50 | New ways to pump horizontal wells | | | | | X | | |
| 51 | Innovative artificial lift concepts | | | | | X | | |
| 52 | | | | | | | | |
| 53 | **COMMENTS FROM JESSICA CAVENS:** | | | | | | | |
| 54 | Too much of an emphasis on the resource assessment and characterization. The first 2 years they picked 3 large characterization projects. I would like to see more of an emphasis put on the development and demonstration of technologies. The early parts of the plan seem to start to head this direction, but on page 28, item #1 they address the characterization and assessment | | | | | X | | |
| 55 | The drilling and completion areas I think are good. | | | | | X | | |
| 56 | Water management is good. | | | | | X | | |
| 57 | Overall, I would use the 2010 plan to emphasize technology development and avoid solicitations for assessment and characterization. | | | | | X | | |
| 58 | D&C, Water and Environmental need to be top priorities - | | | | | X | | |
| 59 | Good that they are going after E&P companies to participate | | | | | X | | |
| 60 | Tech transfer much improved | | X | | | | | |
| 61 | Table of contents mislabeled- Chapter 5 on wrong page | | | | | | | X |
| 62 | Metrics are all focused on RPSEA. Should some be included to clearly state how projects will be judged? Or does it matter? | | | | X | | | |

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| 63 | | | | | | | | |
| 64 | **COMMENTS FROM JAMES DWYER:** | | | | | | | |
| 65 | Overall - I really liked the flow and structure of the document. I know it's an intangible, but to me it seemed easier to read and is well structured. | | | | | | | X |
| 66 | Page 27 - Prioritized Technology Challenges - The first three paragraphs clearly lay out the strategic focus of technologies - an improvement. | | | | | X | | |
| 67 | Page 28 - It's probably "legaleze" but, if I was a subscriber, I'd prefer to know if there will be 1, 2, or 3 solicitations and about when I could expect to see them. | | | | | X | | |
| 68 | Page 28 - 3rd Paragraph beginning with Solicitations and ending on Page 29 with the conclusion of item 1: we might want to spend some time reviewing and condensing or refining this, if only to improve upon it. I see duplication which is either an oversight on our part or wording that is not specific | | | | | | | X |
| 69 | It is great how DOE, NETL and RPSEA have taken real ownership of Technology Transfer | | X | | | | | |
| 70 | Page 49- States that KMD is scheduled to be deployed Septmber 2009: will it be deployed before our 9/15 meeting?; when can we get access to the KMD for review?; who is the point of contact? | | | | | X | | |
| 71 | | | | | | | | |
| 72 | **COMMENTS FROM JANET WEISS:** | | | | | | | |
| 73 | I really support the planned solicitation approach and areas outlined on pages 120-123. | | | | | X | | |
| 74 | The connection of objectives to metrics is clear | | | | X | | | |

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| 75 | Regarding our committee positioning given current debate, we need to clearly advocate for clean natural gas as both a bridge fuel to lower carbon future and as an important component of energy security due to its abundant domestic supply in our opening summaries again. | | | | | | X | |
| 76 | | | | | | | | |
| 77 | **COMMENTS FROM NICK TEW:** | | | | | | | |
| 78 | I am again pleased to see that our previous issues and concerns are being incorporated as we move forward. | X | | | | | | |
| 79 | The cumulative effect of the URTAC over the last few years is showing and has led to improvements in the plan. | X | | | | | | |
| 80 | For example, it's obvious that they have taken our comments on tech transfer very seriously. | X | X | | | | | |
| 81 | | | | | | | | |
| 82 | **COMMENTS FROM CHRIS HALL:** | | | | | | | |
| 83 | Changes have been very responsive to the past Advisory Committee recommendations. | X | X | | X | X | | |
| 84 | Significant progress has been made by DOE, NETL and RPSEA on implimenting the Technology Transfer recommendations from prior Advisory Committee recommendations. Very well done. | | X | | | | | |
| 85 | In part because of the focus of Plan on Unconventional Natural Gas, the projects are concentrated in the mid-continent region of the country. This causes a geographic imbalance of program benefits. | | | | | X | | |
| 86 | Since they are not constrained by Unconventional resources, the Small Producer projects need to have greater geographical distribution, including western producing states. | | | | | X | | |

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| 87 | The objective of building on past projects and regions results in the program failing to be more geographically diverse. | | | | | X | | |
| 88 | The Technology Transfer component should identify deliverables that can be disseminated to all producing regions of the country, helping to balance the geographic reach of the program. This must be leveraged by pushing it to producers. | | X | | | X | | |
| 89 | The metrics of measuring program progress and success are much better defined. | | | | X | | | |
| 90 | p 8: "Universities have served as hosts of the majority of the RPSEA member forums." More emphasis needs to be placed on communicating with producers through their Trade Associations; small producers are not well connected to and are often distrustful of the University system. This effort must be proactive. | | X | | | X | | |
| 91 | Secure funding of the Sec 999 program continues to be a issue; the Administration's proposal to repeal funding is very detrimental. The 2010 Draft Annual Plan speaks for the value of the program. Very strong words need to be written to address this issue. | X | | | | | | |
| 92 | One measure of project selection that should be emphasized should be whether or not it will yield technologies which can be transferred to all producing regions, thereby leveraging the investment and assuring maximum geographical dissemination of information | | X | | X | X | | |
| 93 | There are no projects in the following oil and gas producing states: AL, CA, NV, UT, WY, CO, NE,…….. This needs to be balanced with TT or DOE complimentary program focus. | | | | | | | |

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| 94 | Need a metric for geographical coverage of individual projects (can include TT component). | | | | | | | |
| 95 | P. 73: RPSEA references cost-share contributions of at least 20% of total project costs. This is low. What is the average %? | | | | | X | | |
| 96 | p. 78: Forums referenced were held several years ago; the outreach needs to be continued, especially in regions where there is no activity or focus in order to gage/stimulate producer interest. | | X | | | X | | |
| 97 | p. 82: How are technologies outside of the gas and oil industry that may have application to help achieve the mission of the Program being identified? Has the FLC been engaged? | | X | | | X | | |
| 98 | Need to impliment the Program Sub-Committee Recommendations on Metrics and Benefits assessments | | | | X | | | |
| 99 | Need to impliment the Program Sub-Committee Recommendations on Project portfolio review | | | X | | | | |
| 100 | The Committee should review prior URTAC recommendations to determine if there are any points which should be re-visited. | X | X | X | X | X | X | X |
| 101 | | | | | | | | |
| 102 | | | | | | | | |
| 103 | | | | | | | | |
| 104 | | | | | | | | |
| 105 | | | | | | | | |
| 106 | | | | | | | | |
| 107 | | | | | | | | |
| 109 | **SUM OF COMMENTS IN EACH TOPIC:** | 8 | 11 | 2 | 7 | 52 | 5 | 4 |
| 110 | | | | | | | | |
| 111 | | | | | | | | |

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| 112 | **SUB-GROUP TOPIC ASSIGNMENTS:** | | | | | | | |
| 113 | Scott Anderson | | | | | | X | |
| 114 | Nancy Brown | | | X | X | | Head | |
| 115 | Jessica Cavens | | | | | X | | |
| 116 | Bill Daugherty | | X | | X | | | |
| 117 | James Dwyer | | Head | X | | X | | X |
| 118 | Jeff Hall | X | | | | X | | X |
| 119 | Chris Hall | Head | X | X | X | | X | Head |
| 120 | Bob Hardage | | X | | | X | | |
| 121 | Fred Julander | X | | | | | X | |
| 122 | Ray Levey | | | | X | | X | |
| 123 | Sandra Mark | X | | | Head | | | |
| 124 | Shahab Mohaghegh | | | X | X | | | |
| 125 | Don Sparks | X | | X | | X | | |
| 126 | Nick Tew | | | | | Head | | |
| 127 | Janet Weiss | | | X | | | X | |
| 128 | Sally Zinke | | | Head | | | | X |
| 129 | | | | | | | | |