

Greenhouse Gas Emissions and the Climate Change Program

Emerging Issues

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Greenhouse Gases

- Glossary of Terms
 - WERR – Waste Energy Recovery Registry
 - ES – ENERGY STAR
 - RE – Renewable Energy
 - CCS – Carbon Capture and Storage
 - LMOP – Landfill Methane Outreach
 - AgStar – Agriculture to Methane
 - CBM –Coal Bed Methane
 - GasStar – Natural Gas Star

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- Game Plan

- Develop Reporting(Final Rule - October30, 2009) (PowerPoint Presentation – Covers 14,000 plus facilities)

- <http://www.epa.gov/climatechange/emissions/downloads/FinalMRROverview.pdf>

- Develop Permitting (Proposed Rule – September 30, 2009) (Fact Sheet - Covers 10,000 plus facilities)

- <http://www.epa.gov/NSR/fs20090930action.html>

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- Game Plan (Continued)
- Under American Reinvestment and Recovery Act look at integrating DOE and EPA ENERGY STAR activity under a single residential and commercial rating program with performance, measurement and verification protocols that lead into EPA as the registry of energy efficiency outcomes.

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- Game Plan (Continued)
 - Develop a Clean Energy Program “Waste Energy Recovery Registry”. This encompasses such programs as Landfill Methane Outreach, Greenpower Partnerships and Combined Heat and Power Programs.
 - Setup of more ENERGY STAR Portfolio Manager facility models by EPA and now with DOE help that may get EPA plaques too.
 - http://www.energystar.gov/index.cfm?c=business.us_bldgs

Greenhouse Gases and Pollution

- On Pollution NAAQS is moving lower but has caused for some discussion after publication of first thoughts. In particular on Ozone and 8 hour standard being set at 75 ppb.
- Where will it go to and how in the future to set action as we all continue to go down, perhaps 65 or 70 ppb and about 2017 timeframe. Might happen or might not.
- What is true is greenhouse gas emissions will be a driving force in reducing pollutants across the board.

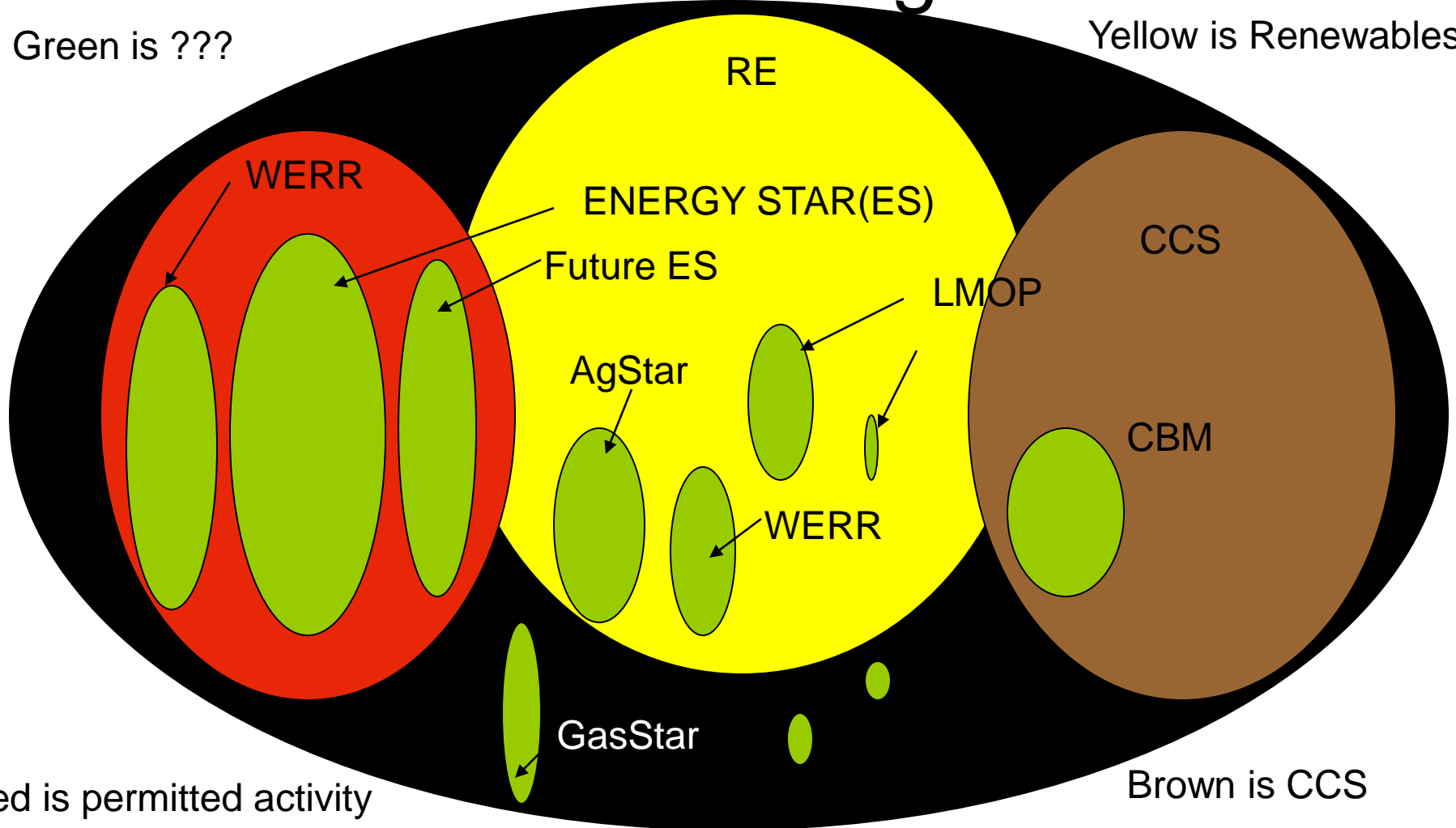
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- Some of the complexity we hear about is cap and trade, need cap and trade umbrella over current planning to open market based resources to innovation and cost sharing of reductions in greenhouse gases
- Without the umbrella you get a CAA focus approach being setup today that is the ongoing step by step. It does not mean no innovations, technology enhancements or loss of market force opportunities, just a smaller approach pursuing the same objectives and more focused sector by sector inside the US only.
- We already have outside the US voluntary programs that are models to leverage methane reductions. Methane is an easy example to pick.

CC 301 Introduction to Greenhouse Gases and Programs

Green is ???

Yellow is Renewables



Red is permitted activity

Brown is CCS

Black is total ton of carbon in MMTC, which is 1.6772 MMTC

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- Five contractual areas for clean energy waste recovery to pay attention to.
 - 1) Relationships between utilities and industrial and commercial facilities clearly defined.
 - 2) GHG Reported is aggregated so delve into handshaking under contractual structures.
 - 3) Power Purchase Agreements must clearly label contractual structures.
 - 4) End user carbon credits and relationships be created in line with registry requirements.
 - 5) Designated relationships is clearly written down and the protocols followed, this is IPMVP for Energy Efficiency or another approved protocol.

Do not always trust the state standard contracts and tariff structures are fine.

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- Contractual needs to be addressed under a GHG reduction plan to figure out who gets the carbon.
 - Not to go into semantics of a carbon market that isn't in place yet, but electrification of compressor stations could be a sticky subject for utilities and the rights to the carbon or not to the carbon.

Questions asked lead to mapping out issues like energy source of electrons in the wires and is the compressor stations under contract to hand or not over the gas saved.

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Concluding Slowly on Momentum

- EPA is setting up all aspects of this and at this point for Reporting EPA is the only entity who will be collecting information on GHG's.
- For GHG Permitting EPA has published the proposed final rule. EPA has no agreement and mechanisms in place for states to do at this point in time.

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- So what to expect, EPA has setup a framework of voluntary programs already in place with more to come and some are now called registry or registries in development. And we have reporting to set baseline permits coming with permitting to cover 70+ percent or more of the facilities reporting GHG's.

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- It doesn't not mean that all the voluntary programs will be the primary means for industrial and commercial facilities to comply, offset credits are hard to come by unless they are certified and validated emission reductions. Remember, the facilities only account for somewhere around 30 percent of ghg emissions nationwide, maybe! We really will not know until they report beginning in March 2011 and when they do, inside bet is somehow they are discovering energy efficiency and conservation practices that help reduces pollution too!

Greenhouse Gases: The Driving Factor

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