Objective – Get gcam-core GCAM5 to solve for the cost curves. Because we switched from GCAM parallel to gcam-core structure there were some issue with getting GCAM to solve with the CMS hector ini files. It turns out that the gcam-core was missing an emissions file.

We are also trying to figure out what method is faster. The matt or the Gokul method. If the matt method works it will be the matt method but there is more room for error there…

Okay so here is the thing about doing the cost curves… I think that we are going to probably want to do it in standalone GCAM and that we might not automate the GCAM stuff from the project perspective because that becomes too hard. However doing it by hand means that we are going to be prone to making mistakes… both are a loose loose situation….

CH asked that we try both the methods and then figure out what we want to do…

First we are going to do Matt’s method because that is what we expect to be the fastest from the computation stand point.

Things we are going to need…

1. A batch file that points to the location of the hector-GCAM parameters to use, must reflect the name
2. The ini file to use
3. The carbon tax aka prices results xml file which will be read in with the batch file
4. The configuration file will need to write the output data base
5. The configuration file will need to be in batch mode
6. The configuration file will need to be have the path thing on
7. The configuration file will need to have the target finder OFF

We are going to use the following as our hector parameter combination

|  |  |  |  |
| --- | --- | --- | --- |
| hectorSA-4680 | Tgav | atm CO2, NPP, Tgav | min |

PROBLEMS

* The matt method returns and error I wonder if the Matt method you also need to turn the find path on?
  + Even after turning the find path thin on we get this error …
    - terminate called after throwing an instance of 'std::ios\_base::failure' what(): basic\_ios::clear
* What if we turn the find cost curve off?
  + Still get the : terminate called after throwing an instance of 'std::ios\_base::failure' what(): basic\_ios::clear
* What if we don’t read in the tax path?
  + Removed <Value name = "policy">../input/policy/carbon\_tax\_hectorSA-4680.xml</Value> from the batch file

Okay so I want to start with a working configuration!

1. Test the reference configuration
2. Test a batch that points at some different hector-GCAM ini files
   1. OKAY ERROR – there is some problem with how we are pointing to the ini files…

Parsing ../configuration-sets/extremes/hectorSA-4680.xml scenario component.

XML parsing complete.

Starting new scenario: CMS-hectorSA-4680\_carboncost

Thu Jul 19 05:37:42 2018:WARNING:printLogHeader: hector version 2.0

Thu Jul 19 05:37:42 2018:WARNING:printLogHeader: hector version 2.0

terminate called after throwing an instance of 'std::ios\_base::failure'

what(): basic\_ios::clear

* + 1. ./gcam.exe -Cconfig-$job.xml -Llog\_conf.xml 59.04s user 3.87s system 72% cpu 1:26.43 total

So I think that it was able to read in the xml… is the problem coming from the pointer xml or from the ini file?

I am going to remove… the

<hector-ini-file>../input/climate/extremes/hectorSA-4680.ini</hector-ini-file>

From the pointer xml and see if it works okay it did! So there is some PROBLEM with the ini files? Are they not saved in the correct location? Is there a problem with the level they are on?

1. GCAM runs when the pointed xml does not point to an ini file… it looks like we were missing the RF volcano could that be the cause?
   1. YES I THINK SO
2. Try running with the tax path and the – seems to be solving! Started the run around 9:00