

# carbon\_model.rb

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variable units variable units FIXME TODO should we make volumes energy contents to avoid unit mismatches?

```
module BrighterPlanet
  module FuelPurchase
    module CarbonModel
      def self.included(base)
        base.decide :emission, :with => :characteristics do
          committee :emission do
            quorum 'from volume and emission factor', :needs =>
[:volume, :emission_factor] do |characteristics|

              characteristics[:volume] *
characteristics[:emission_factor]
            end

            quorum 'default' do
              raise "The fuel purchase's default emission quorum
should never be called"
            end
          end

          committee :emission_factor do # FIXME TODO add date-based
lookup once we have timeseries of emission factors
            quorum 'from fuel type', :needs => :fuel_type do
|characteristics|
              characteristics[:fuel_type].emission_factor
            end

            quorum 'default' do
              FuelType.fallback.emission_factor
            end
          end

          committee :volume do
            quorum 'from cost and price', :needs => [:cost, :price]
do |characteristics|
```

dollars dollars / variable unit FIXME TODO should we make prices \$ / kJ to avoid unit mismatches?

variable units

variable units

FIXME TODO fill in location- and date-based quorums quorum  
:from\_fuel\_type\_and\_state\_and\_date, needs => [:fuel\_type, :state, :date] do  
|characteristics, timeframe| end

quorum  
:from\_fuel\_type\_and\_petroleum\_administration\_for\_defense\_district\_and\_date,  
needs => [:fuel\_type, :petroleum\_administration\_for\_defense\_district, :date]  
do |characteristics, timeframe| end

quorum :from\_fuel\_type\_and\_state, needs => [:fuel\_type, :state] do  
|characteristics, timeframe| end

quorum  
:from\_fuel\_type\_and\_petroleum\_administration\_for\_defense\_district, needs  
=> [:fuel\_type, :petroleum\_administration\_for\_defense\_district] do  
|characteristics, timeframe| end

quorum :from\_fuel\_type\_and\_date, needs [:fuel\_type, :date] do  
|characteristics, timeframe| end

```
characteristics[:cost] / characteristics[:price]
end

quorum 'from fuel type', :needs => :fuel_type do
|characteristics|

characteristics[:fuel_type].average_purchase_volume
end

quorum 'default' do # FIXME TODO get rid of this if we
ever make a fallback fuel_type

FuelType.fallback.average_purchase_volume
end
end

committee :price do

quorum 'from fuel type', :needs => :fuel_type do
|characteristics|
```

dollars / variable unit

FIXME TODO should this be only user-supplied, or should we specify a  
fallback? committee :fuel\_type do |characteristics, timeframe|  
FuelType.fallback.fuel\_type end

```
        characteristics[:fuel_type].price
      end
    end

    committee :petroleum_administration_for_defense_district do
      quorum 'from state', :needs => :state do
|characteristics|

characteristics[:state].petroleum_administration_for_defense_district
      end
    end

    committee :state do
      quorum 'from zip code', :needs => :zip_code do
|characteristics|
        characteristics[:zip_code].state
      end
    end

    end
  end
end
end
end
```