In [1]:

```python
import numpy as np
import pandas as pd

import matplotlib.pyplot as plt

from ema_workbench.util.utilities import load_results

from ema_workbench.analysis.plotting import lines
```

C:\Users\stein042\.conda\envs\coasting\lib\site-packages\ema_workbench\em_
framework\optimization.py:48: ImportWarning: platypus based optimization n
ot available
  warnings.warn("platypus based optimization not available", ImportWarnin
g)
C:\Users\stein042\.conda\envs\coasting\lib\site-packages\sklearn\externals
\six.py:31: DeprecationWarning: The module is deprecated in version 0.21 a
nd will be removed in version 0.23 since we've dropped support for Python
2.7. Please rely on the official version of six (https://pypi.org/project/
six/).
  "(https://pypi.org/project/six/).", DeprecationWarning)

In [2]:

```python
results = load_results("./data/2020-08-11T11-43-experiments900x5.tar.gz")
```

In [16]:

```python
experiments, outcomes = results
```

In [17]:

```python
outcomes['percent-burned'].shape
```

Out[17]:

(900, 5, 201)

In [18]:

```python
outcomes_2D = {key:np.mean(outcomes[key],axis=1) for key in outcomes.keys()}
results_2D = (experiments.copy(), outcomes_2D)
```

In [27]:

```python
outcomes_2D['TIME'].shape
```

Out[27]:

(900, 201)

In [33]:

```python
outcomes_2D['TIME'] = np.tile(range(outcomes_2D['TIME'].shape[1] + 1),(outcomes_2D['TIM
E'].shape[0], 1))
```

In [34]:

```python
import matplotlib.pyplot as plt
from ema_workbench.analysis.plotting import lines

figure = lines(experiments, outcomes_2D) #show lines, and end state density
plt.show() #show figure
```