



Worksheet 1.3

A National Energy Grid and a Production Possibilities Table

A great advantage of production possibilities tables is that they allow you to consider only the mathematical implications of your course of action, i.e. to get three more of these you must give up one of those. A great disadvantage is that they cannot reflect the political and ethical considerations of determining whether society should, could or even wants to give up one of those to get three more of these!

Study the table and the rules below then answer the questions that follow.

British Government - where the money goes (pence per pound)

	A	B	C	D	E	F	G	H	I	J	K
Energy Infrastructure	45	43	41	38	35	31	27	22	16	9	0
Social Welfare	0	5	10	15	20	25	30	35	40	45	50

Rules

- For each pound the government takes in, it has spending discretion only in the two areas shown above: all other expenditures are fixed.
 - As the government switches from one combination to another, any increase in total discretionary spending must be offset by increased taxation. Any decrease may result in tax reduction.
- Illustrate the information from the table above in a production possibilities curve diagram.
 - Briefly describe what you feel the consequences would be for a society that elected:
 - Combination A
 - Combination K
 - Combination F
 - Is one of the three choices above superior to the other two? Why or why not?
 - You are the prime minister. The country is currently at combination H. Some of your top scientists tell you that they believe that given sufficient funding, they can develop a 'smart grid' energy infrastructure that within ten years would make the nation energy independent, in other words, it would no longer depend on imported energy to support its economy. To get sufficient funding for this system, the economy would have to shift from combination H to combination D for at least that



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ten-year period. Other highly respected scientists tell you that the development of such a system is impossible and could only lead to an increased dependence on foreign energy sources. If successful, the first group of scientists say, after ten years energy infrastructure expenditures could be reduced by at least one half at all combinations. What are some of the possible consequences to the nation (and you as prime minister) if:

- a. You evaluate the arguments of each group of scientists and decide the second group is correct and the energy infrastructure system is not feasible?
- b. You agree with the first group of scientists, the economy shifts, and the system works?
- c. You agree with the first group, the economy shifts and the system doesn't work?
- d. You agree, the economy shifts and before it can be determined if the energy infrastructure system works, voters vote you and your party out of office because of dissatisfaction over reduced social welfare spending?