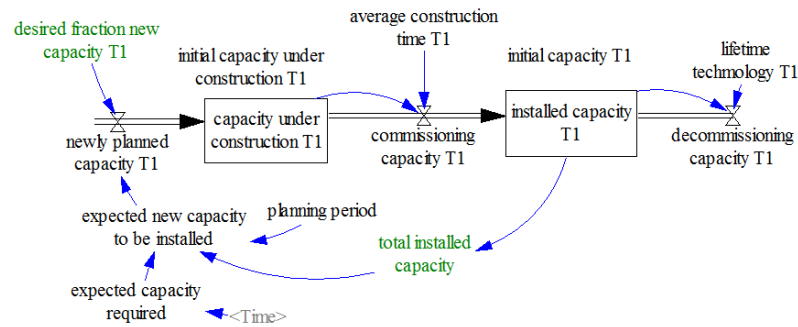


Indicative solution of the case (EN)

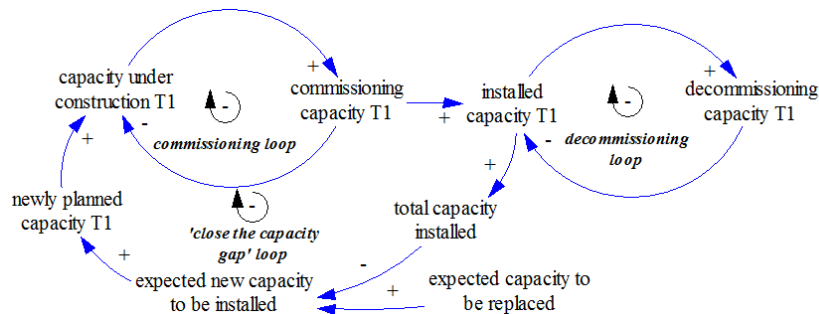
dr. Erik Pruyt

September 2012

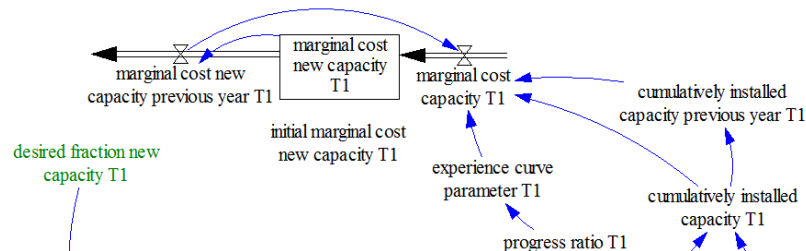
This case deals with the competition of new energy technologies with existing technologies and other new technologies, and could be extended to spreading/concentrating subsidies for innovative renewable energy technologies. First students need to make a SDF (Figure 1(a)) and a detailed CLD (Figure 1(b)) of a small part of the model description. Second, students need to add a learning curve structure 1(c)) and plot the *marginal cost*.



(a) SFD of the first partial Energy Transition model



(b) Full CLD of the first partial Energy Transition model



(c) SFD of the learning curve added to the first SFD

Figure 1: Partial SFDs and CLD of the Energy Transition model

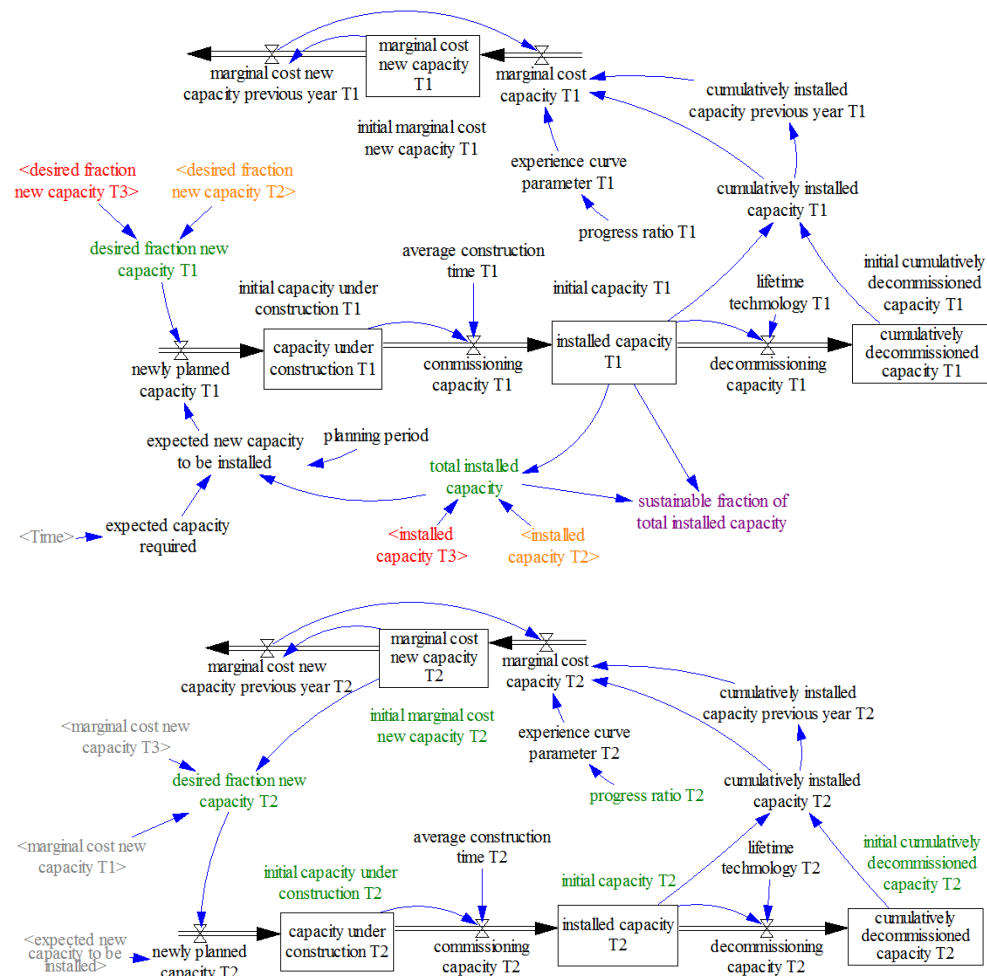


Figure 2: SFD of three competing Energy Technologies

Then they need to extend the model with a sustainable alternative (Figures 2(a) and 2(b)), simulate it, and make graphs. Students also need to explain how this structure generates this behavior. They need to test the sensitivity of the model for changes in the parameters of the learning curve and for changes in a function. Finally students need to add another sustainable technology (Figure 2(c)) and test the influence of spreading investments over two alternatives.