

Danny Ludwig

GRID

DEVELOPMENT & ENERGY

GRID is all about the development and maintenance of your energy grid. The aim is to convert your energy supply infrastructure to renewable energy. While you are doing so, you must improve your cities and build power plants to cover their energy demand.



3-4
Players



45-60
Minutes



Ages
14+



This game was developed by students in the Industrial Design course at the University of Wuppertal as part of the project "Perspectives in Play", which has been funded by the German Federal Foreign Office. The project aims to develop games that turn different aspects of politics into an interactive experience. You will find all the games in the series at www.perspectives-in-play.com. For more information on the German Federal Foreign Office and its programmes, please visit www.diplo.de/aussenpolitiklive.







Warning: Contains small parts that can be swallowed. Not suitable for children under 3.

CONTENTS




To play the game, you will need a pair of scissors and 3-4 pencils in different colours. Optionally, you can use small playing pieces (“markers”) to document your current money and energy status in the accompanying tables. Select the board according to the number of players.

----- Cut

INCLUDED

-  2 boards
-  60 energy chips
-  4 progress tables
-  1 price and upgrade list

REQUIRED

-  1 pair of scissors
-  3-4 coloured pencils
-  2 markers (per player)












EXPLANATION

Cities, power plants, and power lines.

In the course of the game, you will build a network of buildings (cities and power plants) and power lines by drawing the corresponding symbols in the fields on the board – see overview at right.

After you have drawn a building, its position can no longer be changed.

Only one building can be drawn per field.

	City, level 0
	City, level 1
	City, level 2
	City, level 3
	Power plant (conventional)
	Power plant (renewable)
	Power plant (with upgrade)
	Power plant (renewable, with upgrade)
	Power line

The aim of the game.

To win, you must achieve these targets:

1. Own a level 3 city.
2. Your number of renewable-energy power plants equals the number of cities you have.

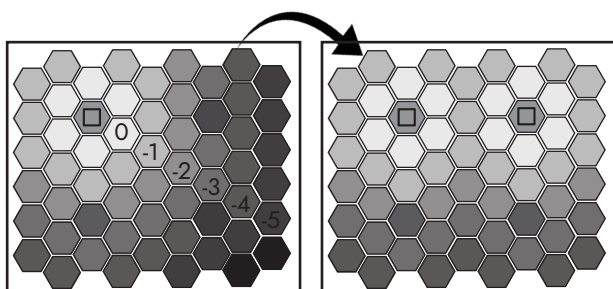
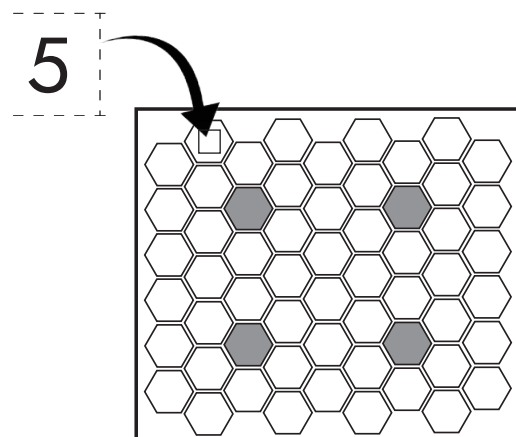
The first player to achieve both targets wins the game.



EXPLANATION

Distribute energy chips.

Before starting to play, mix up the energy chips, place them face down and randomly distribute them among all the white fields (see right). The numbers on the energy chips show the maximum power that can be generated on the field. There are more chips than fields.



The further away from your cities the field is, the lower the power you receive from the field (see left). Locate new cities cleverly to offset this disadvantage.

Cities and money.

For every city at level 0 at the beginning of your turn, you receive € 30. Cities can be upgraded as soon as you have a specific amount of electricity. This enables the city to generate more money. You don't have extra costs, but must maintain the electricity level from now on. If you cannot maintain your electricity level, the city with the highest upgrade level is deactivated and does not generate money until it is activated again. (You can use a pencil to mark the electricity level you require on

the attached tables.) You can reactivate a city by purchasing it again. However, you must wait until you have reached your required electricity level again.

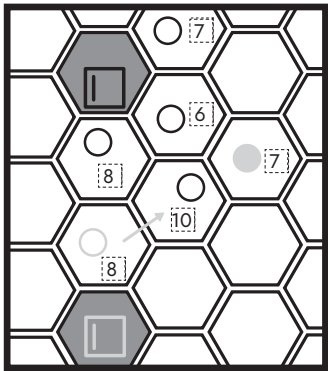
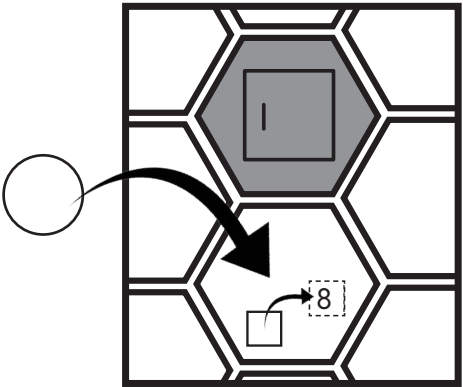
You can build new cities wherever you like. But they must always be next to a field on which another one of your buildings is located. The energy chip is then removed from the field. Place it next to the board.



EXPLANATION

Building of power plants and power lines.

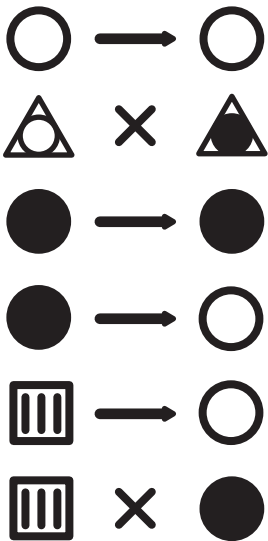
Power plants can only be built on the fields that are next to your own buildings. As soon as you draw a power plant, the energy chip on the field is turned face up and your power level will increase by the chip's value (at right). Power rises and falls, but cannot be spent like money.



You can build plants and power lines.

Power lines enable you to “tap” other players’ buildings (at left). They can be routed from your own buildings to all other buildings. When tapping a power plant, the generated energy is shared by both players equally (rounded off).

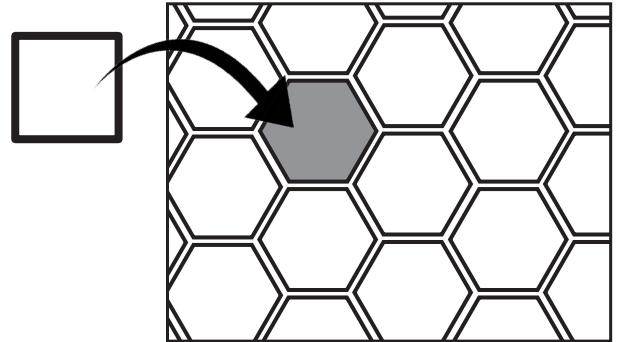
You receive neither power nor money for tapping a city. A tapped building is owned by both players, therefore each can build their own buildings around the field. You can only tap power plants that have the same or a higher level than your own power plant (see right). From cities, you can only tap level 0 power plants. You can build as many power lines as you can pay for. One power line stretches to 1 field.



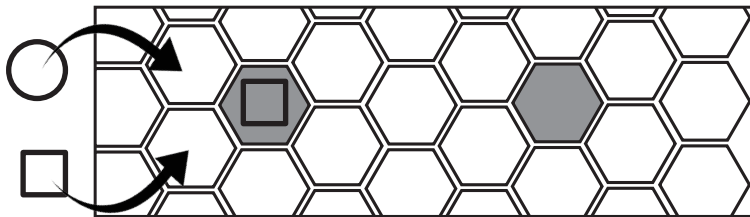
THE ROUNDS

BEFORE YOU BEGIN

Before you begin, decide which player will start and then each player in turn places their cities on the grey fields.



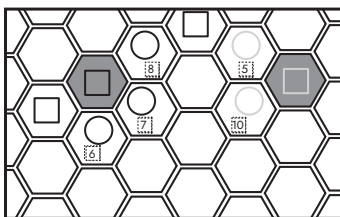
AT THE START AND BEFORE EACH TURN



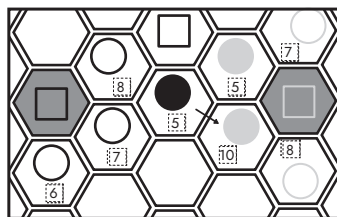
Each player receives € 100 to start.

Before your turn, you receive another € 30 for your city. When it's your turn, you can carry out as many actions as you'd like, as long as you can pay for your investments.

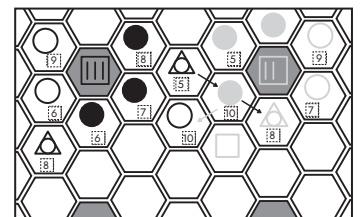
TAKE YOUR TURN



Build new cities and power plants.



Tap the other players' buildings.



Upgrade your own power plants.

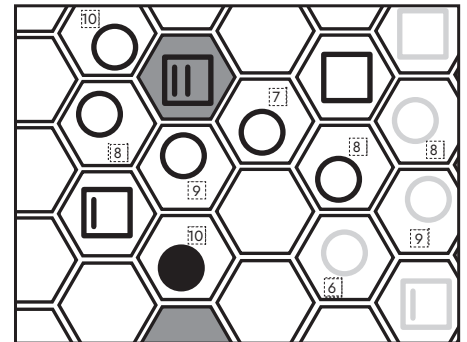


EXAMPLE ROUND

1. RECEIVE MONEY.

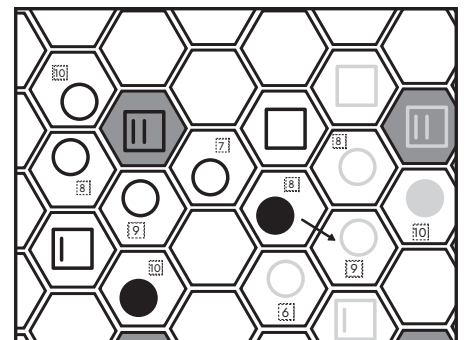
In this example, player black owns 3 cities at level 0, 1, and 2.

She receives € 190 this turn: € 30 for level 0 + € 60 for level 1 + € 100 for level 3.



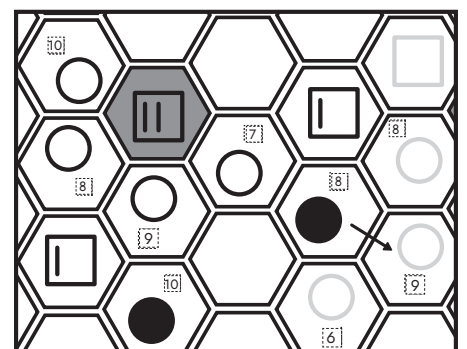
2. CARRY OUT ACTIONS.

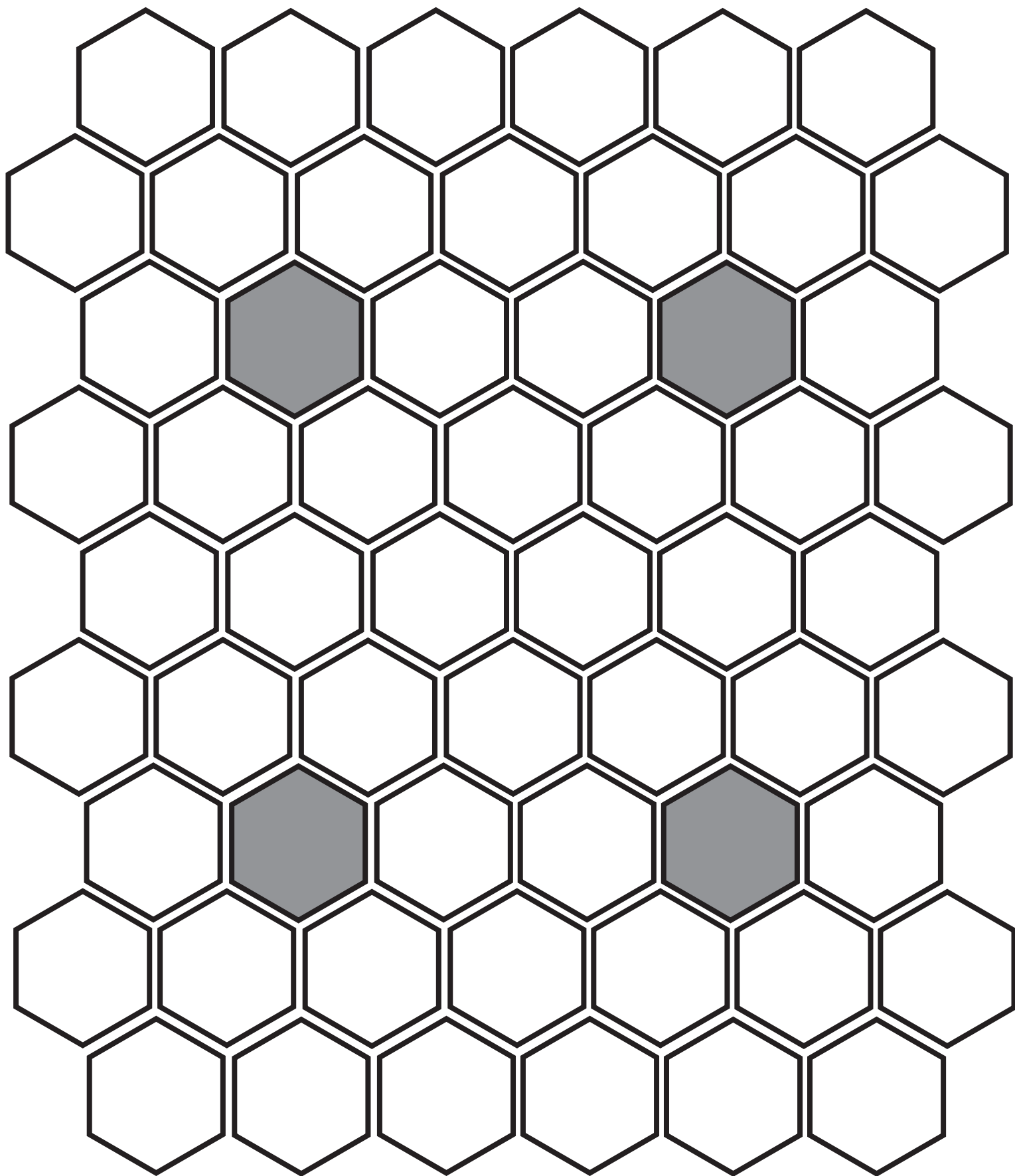
She uses the money to upgrade one power plant to protect it against being tapped by player grey. Next, she builds a power line to tap player grey's power plant. As a result, player black receives 4x additional energy. Due to the rounding off rule for tapping, player grey loses 5x energy.

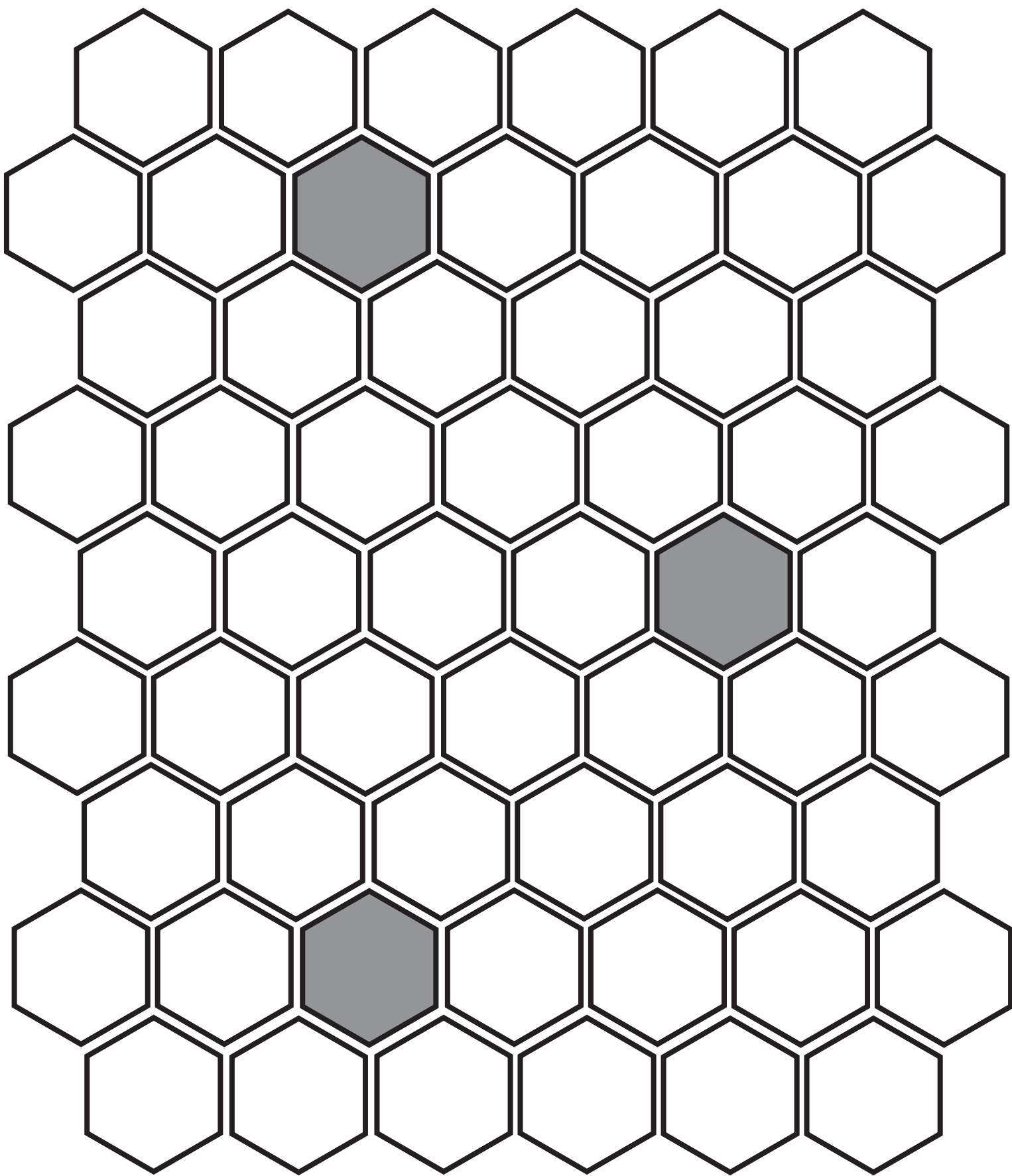


3. COMPLETE ROUND.

Player black uses the energy she won to upgrade her second city to level 1. She will receive more money in her next round. At the same time, she is protected against being tapped. Now it is player grey's turn.





















5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10
5	6	7	8	9	10



PRICE LIST

	Power plant (conventional)	€ 50
	Power line	€ 80
	City, level 0	€ 100
	Power plant (renewable)	€ 200
		

UPGRADES

	€ 50	
	€ 50	
Required	Generated	
0 ⚡		€ 30
30 ⚡		€ 60
40 ⚡		€ 100
50 ⚡		€ 160
		

PRICE LIST



Power plant (conventional) € 50



Power line € 80



City, level 0 € 100



Power plant (renewable) € 200



UPGRADES



€ 50 →



€ 50 →



Required

Generated

0 ⚡



€ 30



30 ⚡



€ 60



40 ⚡



€ 100



50 ⚡



€ 160

