Carburetor

- **Players:** 2-6
- **Duration:** 2-4 hours
- **Older:** from 12
- **Strategy:** 80%
- **Chance:** 20%

Carburetor is a board game where the players will reinvent the industrial revolution. Playing an electricity producent on a colonial island, they will soon realize that the price to pay for a better profit is a larger waste production! They will learn how to invest wisely, think in the long term, avoid to pollute themselves, thwart the plans of the other players, and be wary of the terrorists. Who knows, perhaps one player will be the first to develop a fusion power plant?

Goal

Collect more money than the other players, and obtain the energy production monopole on the island. The game is over as soon as it becomes clear that one player can buy all belongings of the other players.
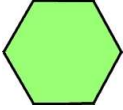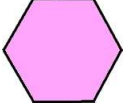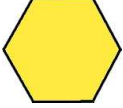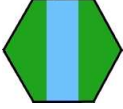
Composition
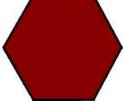
- Large game board picturing the island
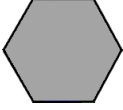- Conjuncture board
- 27 fluctuation cards
- Bank notes : 1C, 2C, 5C, 10C, and 50C
- 36 prospector pieces (6 for each color)
- 10 terrorist pieces
- Power plant pieces (coal, oil, nuclear, hydro, wind, solar, and fusion, in the 6 colors)
- 6 conjuncture pieces (coal, oil, uranium, rain, wind, sun)
- Black and white fuel-and-waste pastilles
- A six-faced dice
- Blank accounts sheets

✪ Game board
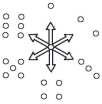
The game takes place on the board below. The squares are hexagonal, and there are symbols and color zones.
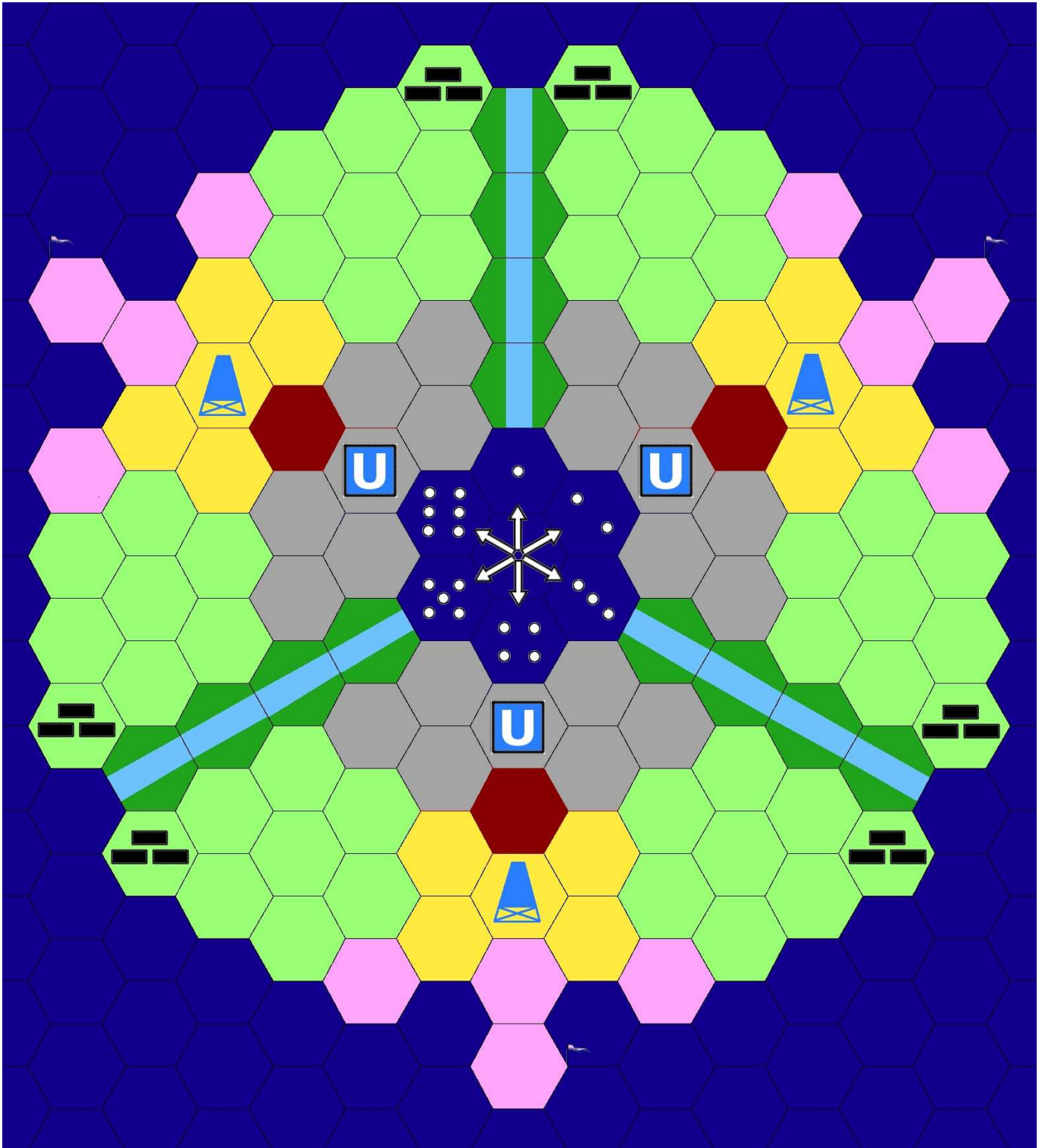
Color zones :

- **Dark blue:** deep water, no access.

- **Light green:** plain, suitable for coal, oil, nuclear and fusion.

- **Pink:** coast, suitable for wind power.

- **Yellow:** desert, suitable for solar power.

- **Blue and green:** river, suitable for hydroelectric power.

- **Grey:** mountain, no construction.

- **Dark red:** terrorist hole, no construction.

Symbols :

- **Rectangles:** coal mine, reduces the coal price when exploited.

- **Trapezium:** oil well, reduces the oil price when exploited.

- **U:** uranium mine, reduces the uranium price when exploited.

- **Flag:** peninsula, increases the efficiency of wind power.

- **Weathercock:** indicates the directions according to dice.

🌀 *Beginning*

The players decide together who is responsible for the bank note pool. A starting amount of 15C is given to each player.

The conjuncture pieces are put on the first era of the conjuncture board at the repective starting values 2C for coal, 5C for oil, 4C for uranium, and 0C for sun, wind and rain.

The fluctuation cards are collected and mixed to make a heap.

The players throw the dice and the larger number begins. Then, the next turn will always be to the player sitting to the left of the one who has just played.

The first turn is special : it is dedicated to the initial placement of the prospectors. Each player begins with one prospector, to be put anywhere on the game board (except the dark blue hexagons, which are not accessible).

🌀 *Turns and actions*

A turn follows always the same sequence:

1. The player throws the dice.
2. If there are terrorists on the game board, the player choses a terrorist piece and moves it in the direction corresponding to the number indicated by the dice (according to the wethercock in the center of the board).
3. The player picks a fluctuation card, reads it aloud, and follows the instructions. The card is put aside (do not put it back in the heap). If the heap is empty, the cards are collected and mixed, to form a new one.
4. If the player has active power plants, he collects the money from their production, with the condition that the possible waste can be disposed of on a free space.
5. The player is allowed two actions per prospector. The possible actions are:
   - move to an adjacent hexagon,
   - build a plant,
   - demolish one of the player's own plants,
   - clean the waste off the current hexagon at the cost 2C for coal/oil waste and 5C for radioactive waste,
   - exploit a mine or an oil well,
   - corrupt a concurrent plant for twice its price,
   - kidnap a concurrent prospector for 500C.
6. The player can buy fuel at the current price, but not more than can be placed in the corresponding power plants. The prices of coal, oil and uranium are reduced by 1C for each time a prospector has exploited a coal

mine, oil well and uranium mine, respectively, during this turn. For 500C, the player can buy a prospector and place it anywhere on the board game. There is a maximum limit of 6 prospectors.

7. The turn is given to the next player.

Instead of doing multiple payments during the turn, the players have the possibility to write down each transaction in a column of an accounts sheet. At the end of the turn, the profits and costs are summed and the total is finally collected (if positive) or payed (if negative). This system helps to spare time and to have an overview of the state of affairs.

Plants

The different power stations have different properties of building cost, yield and pollution, and are exposed to different conjunctures.

Exhaustible:
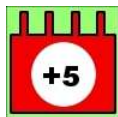
- **Coal:** the plant costs 5C (demolition 2C), the fuel costs on average 2C and yields 5C when burned. Thus, the pay-back time is two turns (benefit of 3C per turn), but a coal waste is produced each turn. Can only be built in a plain.

- **Oil:** the plant costs 12C (demolition 2C), the fuel costs on average 5C except at the end of the game when the oil prices explose, and yields 10C when burned. Thus, the pay-back time is three turns (benefit of 5C per turn), but an oil waste is produced each turn. Can only be built in a plain.
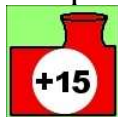
- **Nuclear:** the plant costs 50C (demolition 5C), the fuel cost on average 3C, and yields 15C when burned. Thus, the pay-back time is a little more than four turns (benefit of 12C per turn), but a radioactive waste is produced each turn. Can only be built in a plain.

Renewable:
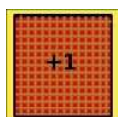
- **Solar:** the plant costs 10C (demolition 3C). By normal sunshine, it yields 1C per turn without needing any fuel nor productiong any waste. Thus, the pay-back time is 10 turns. Can only be built in a desert.
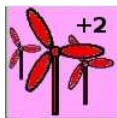
- **Wind:** the plant costs 20C (demolition 2C). By normal wind, it yields 2C per turn without needing any fuel nor productiong any waste. Thus, the pay-back time is 10 turns. Can only be built on a coast. On a peninsula, the yield is increased by 1C per turn.

- **Hydro:** the plant costs 40C (demolition 4C). By normal rain, it yields 6C per turn without needing any fuel nor producing any waste. However, its yield is reduced if there is another hydro plant upriver: in such case, the yield is 2C plus the number of free (without building) hexagons upstream. In normal conditions, the pay-back time is six to seven turns. Can only be built on a river.
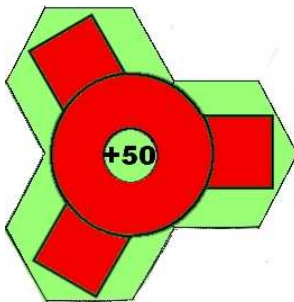
- **Fusion:** the plant costs 300C (demolition 15C) and yields 50C per turn without needing any fuel nor producing any waste, undependently of any conjuncture. Thus, the pay-back time is six turns. Can only be build on a plain and needs three free hexagons. Once built, the plant counts for one single square for the movements of the prospectors.

🌀 *Construction, demolition, corruption and kidnapping*

Tu build a plant, the player places a prospector on a suitable hexagon, uses an action, and pays the buiding cost. One can build only on the right terrain type, where there are no other building, no mine and no waste.

To remove one of his own plants, the player places a prospector on the power station, uses an action, and pays the demolition cost. It eliminates also the eventual fuel existing in the station.

To corrupt a plant, the player places a prospector on the concurrent power station, uses an action, and pays twice the building price for this type of station (to the bank note pool). The station and the eventual fuel existing in the are controlled by the new owner.

To kidnap a concurrent prospector, the player places a prospector on the same hexagon, uses an action, and pays 500C. The concurrent prospector is removed from the game board.

@ *Fuel and waste management*

Fuels and wastes are symbolised by pastilles. Black pastilles represent both coal and oil fuels, as well as coal and oil wastes. White pastilles represent uranium fuel as well as radioactive waste. The pastilles are purchased at the current price of the corresponding fuel and placed in the power stations. During a subsequent turn, the player can recover the money produced from burning the fuel by placing the pastilles, now transformed into wastes, somewhere on the board game. The rules for the waste placement are the following:

- There are no building on the hexagon.
- One hexagon can contain only one type of waste: either black pastilles (coal and oil waste) or white pastilles (nuclear waste).
- One hexagon cannot contain more than two black pastilles or three white pastilles.
- The waste can pe placed anywhere on the green zone where it is produced or an adjacent color zone (mountain, desert, river or coast), but not further away. For example, the terrorist holes and the peninsulas are not accessible for the waste since one has to cross two color zones to reach them.
- A player cannot place waste on an hexagon where there is a concurrent prospector, except if there is also one of his own prospectors.

To clear the waste off an hexagon, a player places a prospector on the polluted hexagon, uses an action, and pays the elimination price: 2C for black pastilles and 5C for white pastilles, independently of the number of pastilles on the hexagon.

@ *Terrorists*

Terrorists appear during the game via fluctuation cards, on the dark red hexagons in position 2, 4 or 6 according to the weathercock. At the beginning of the turn, the player throws the dice and moves one terrorist at choice by one hexagon in the direction indicated by the dice. If the move leads to a dark blue hexagon (not accessible), the terrorist stays still.

When a terrorist encounters a building, everything on the hexagon is destroyed. If a prospector is caught by a terrorist, it is kidnapped and can be ransomed for 200 C. After an attack, the terrorist is removed from the game.

@ *Conjuncture and era change*

The fuel prices and weather conditions vary during the game. The conjuncture is indicated by the conjuncture pieces (black=coal, red=oil, blue=uranium, yellow=sun, pink=wind, grey=rain) on the conjuncture board. The conjuncture must be within the

limits -2C and 12C. For coal, oil and uranium, the conjuncture shows the fuel prices. For the renewables, it corresponds to the amount of sunshine, wind and rain: by normal weather, they lay at zero position; a positive value means an extra profit per station, and a negative value means a loss of production. For example, a solar power plant, which produces +1C per turn by normal sunshine, will produce +3C per turn if the sun conjuncture is at +2C, and will not produce anything if it is negative.

The conjuncture can change in two ways: either randomly according to the fluctuation cards, or deterministically as a function of the era. When a player picks a fluctuation card where a conjuncture is indicated, this conjuncture is incremented by 1C if the dice indicates 4, 5 or 6, and decreases otherwise. Some cards indicate that a conjuncture will increase or decrease by 1C: in such case, the number shown by the dice specifies which conjuncture is affected.

Six eras succeed one another during the game: industrial revolution, fossil fuel era, small oil crisis, nuclear era, great oil crisis, and future energy era. One fluctuation card in the heap is responsible for the era change. An era change means two important things: each player gets a supplementary prospector to be placed immediately anywhere on the game board (beginning with the player who picked the era change card), and the conjuncture pieces are moved to the next era following the relative changes of the curves plotted in the conjuncture board (no change for the renewables). Thus, for example, if the oil price is 2C at the second era, it will increase to 5C when changing to the third era. Once the last era is reached, there are no more era changes.