

## Phase 4: Building

1. »LAST PLAYER« **CHOOSES, CANNOT BUILD** »THROUGH« **POSSIBLE CITIES**: the »last player« chooses the cities of the robot. He chooses as long as the robot can pay for them. The robot can never voluntarily build »through« cities. If the player chooses a city that still has an empty building space for the robot, the robot must build in this city.
2. **ALL CITIES, NEVER MORE THAN** »FIRST PLAYER«: the robot builds as many cities as possible, but not to a total number greater than the »first player«.
3. **ONLY SUPPLIED CITIES**: the robot only builds up to as many cities as he can supply with energy from his power plants.
4. »STEP 1«: **ALL CITIES BUT LESS THAN 7, OTHERWISE ALL CITIES. NEVER TO** »FIRST PLAYER«: in »Step 1«, the robot builds as many cities as possible, but never more than 6. In »Step 2« & »Step 3«, the robot builds as many cities as possible. Independent of the »Steps«, he never builds in cities with houses of the »first player«. If the »first player« changes or builds in cities with the robot, of course the houses of the robot stay in these cities.
5. »STEP 1«: **1 CITY**, »STEP 2«: **2 CITIES**, »STEP 3«: **3 CITIES**: the robot builds one city during »Step 1«, two cities during »Step 2« and three cities during »Step 3«.
6. **ALL CITIES**: the robot builds as many cities as possible.

## Special Abilities

1. **GAME START: GETS 100 ELEKTRO**: during the game preparation, the robot gets 100 Elektro (instead of 50 Elektro).
2. **PHASE 1: ALWAYS »LAST IN PLAYER ORDER«**: during the whole game, the robot is always »last in player order«.
3. **PHASE 2: PAYS HALF BID FOR POWER PLANTS**: during the whole game, the robot pays only half of his bid (rounded down), when he gets a new power plant.
4. **PHASE 4: ALL CITIES COST 10 ELEKTRO**: during the whole game, the robot always pays 10 Elektro for all city building spots (instead of 10, 15 or 20 Elektro). He still must pay the connection costs between the cities.
5. **PHASE 4: ALWAYS BUILDS FIRST CITY FOR 0 ELEKTRO**: during the whole game, the robot always pays 0 Elektro for the first city he builds in phase 4 (including the connection cost!).
6. **PHASE 5: GETS INCOME FOR +1 CITY**: during the whole game, the robot receives an income for +1 city, when supplying cities with his power plants.

Discover the fire in the sparkling Stone Age

## POWER GRID THE FIRST SPARKS

FRIEDEMANN FRIESE

Number of players: 2 - 6 | Age: 13+ | Playing time: 60 minutes  
Contents: board tiles, storage board, technology cards, 200 wooden playing pieces

Follow us back in time, and relive the early beginnings of mankind. It is the birth of a new Power Grid experience: Stone Age, fire and food. The First Sparks is much faster and far more direct: you are immediately part of the action. Each turn, each decision is important.

With plenty of wooden clan members, animal food tokens, a variable game board and Stone Age technology cards, you can start at the beginning of Power Grid.



The ruthless economy game

## POWER GRID FACTORY MANAGER

FRIEDEMANN FRIESE

Number of players: 2 - 5 | Age: 13+ | Playing time: 60 minutes  
Contents: factory boards, storage board, playing money, 100+ factory tiles, 70+ wooden playing pieces

After Power Grid taught you the tough competition between energy producers, now you get to know the road traveled by energy consumers. Start to be a Factory Manager and make the important decisions to improve your own factory. Power Grid - Factory Manager is a Business-Buildup-Game. By being close to the theme, the game is logical and coherent in its main features. A clever new mechanism improves the game by affecting the player order and the actions on the market.

But do not say we did not warn you: Because of only 5 turns, the game is exciting right from the start. Be careful all the time or your fellow players will mercilessly leave you behind!



Autor: Friedemann Friese  
Graphik & Design: Maura Kalusky & Harald Lieske  
Rules: Henning Kröpke  
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Rio Grande Games  
PO Box 1033  
Placitas, NM 87043, USA  
RioGames@aol.com  
www.riograndegames.com



# Friedemann Friese POWER GRID

## EXPANSION The Robots



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GAMES

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The Robots expansion can only be played with a copy of POWER GRID (Rio Grande Games, 2004).

2-5



13+



This expansion can only be played with a copy of Power Grid (Rio Grande Games, 2004). The game rules for Power Grid are the same. The following paragraphs only describe the changes for the robots and the special abilities of the robots.

## Contents

- 2 cardboard die-cut sheets with robot puzzle tiles
- this rules sheet

## Introduction

Two players have a new opponent for their games: the robot acts as an additional player. Thanks to his different actions and special abilities, he is a strong opponent. The players manage the robot's »decisions«, and can use him to act against the other player(s). With this expansion, Power Grid is an exciting and fun experience for 2 players! The expansion is designed for 2 players. Players can use the robots with up to 5 human players, as well; or use more than one robot in a single game. When playing with 2 players, just give each player a robot and enjoy a very interesting »4-player« experience!

## Preparation

Sort the different puzzle tiles of the robot into separate piles (The First City, phases 2–4, and the special abilities each have their own piles) and shuffle each of them. Draw one tile from each pile and construct the robot with the head (The First City tile) at the top down to the feet with the »Special Ability« tile.

The robot consists of 5 tiles, one tile with rules for each phase (except phase 1 »Determine Player Order« and phase 5 »bureaucracy«), the first city and a special ability, which the robot uses during the game.

## General Robot Rules

The robot acts as an individual player. A game with two human players and one robot is prepared as for three players as written in the base rules (Number of regions, Resource Supply, etc.)! The robot receives its own set of houses and places one each next to the tracks for player order and connected cities. He follows all rules of Power Grid with the following general additions.

**The »Golden Robot Rule«:** if the text of a puzzle tile contradicts or violates one of the rules of Power Grid (both base game and expansion rules), follow the text of the puzzle tile.

The robot's money is visible for all players and can be counted at all times.

If the robot needs to make random decisions (e.g. building one of several cities with same connection costs – see below in phase 4), one player takes two each of different colored houses equal to the number of choices, puts one on each of the cities being considered and the other in his hand. Then another player draws one randomly and this is the city built. The players return these houses and place the robot's house on the city chosen.

Whenever the rules mention »first (last) player« or just »players«, it always means human players. If the robot's position in the general »player order« is important, the rules only write about »last (first) in player order«. Even when playing with two or more robots, the human players make all necessary decisions.

Sometimes the robot will not play optimally or even will make stupid decisions. Please use these robot rules exactly as written, even if the decisions of a human player would be different.

## Phase 1: Determine Player Order

Always determine the player order including the robot. When it is the robot's turn during each of the phases of a game round, he plays all the actions as a human player would.

## Phase 2: Auction Power Plants

The robot never bids on a power plant if the power plant has a lower number than his smallest power plant. He also never bids on a fourth power plant if it supplies fewer cities than each of the three power plants in his possession. He always keeps or increases the efficiency of his power plants to supply the highest possible number of cities. The robot ignores the power plants which cost more than the amount of money he has. When the robot can supply 2 or more cities more than he has already connected with his power plants, the robot passes and never bids on power plants. He ignores the bidding rule on his puzzle tile.

**Addendum for »Central Europe« and »Spain & Portugal« maps:** When the robot only has connected cities in regions where nuclear power plants are forbidden, the robot never bids on these power plants.

Then the robot decides which of the remaining power plants he is interested in, following the rules of his puzzle tile for phase 2. When there is only 1 possible power plant left, he will bid on this one (even if the puzzle tile tells him to bid on the »second smallest number«).

When the robot bids for a power plant, he always raises the bid by exactly 1 Elektro up to the limit allowed by his puzzle tile for phase 2. Of course, he cannot bid more money than he has. If the robot chooses the power plant himself, he starts the auction with the minimal bid.

If the robot buys a fourth power plant, he always discards the smallest power plant (the power plant with the smallest number). If there are resources on the discarded power plant he tries to store them on one or more of his remaining power plants.

**Addendum for promo cards:** The robot only bids on the power plant »Flux-Generator«. He ignores all other special promo cards.

## Phase 3: Buying Resources

At the start of this phase, the robot always redistributes all remaining resources on his power plants. Each normal power plant gets resources for a single production, then the hybrid power plants get their demand. If there are still resources remaining, the players start by distributing them again on the normal power plants. If there are not enough remaining resources for all the robot's power plants, the robot always distributes them to the power plants following the above rules.

When it is the robot's turn, he buys the resources for a normal energy production for all of his power plants. If he owns a hybrid power plant, he buys the necessary resources for this type of power plant after all the normal power plants. He chooses the cheaper resources available for a hybrid power plant! Following the rules of his puzzle tile for phase 3, he only stops buying when he either bought all wanted resources or he runs out of money.

If the robot does not have enough money to buy resources for a normal production of all of his power plants, he always buys the resources for the power plants to supply the most cities with energy. If he needs to supply a hybrid power plant, or has nearly equal power plants (same number of supplied cities, but demand for different types of resources), he always buys the cheaper resource type. If these resources have the same price, he always buys the resource type which has the lower refill number in phase 5. If this is again tied, he first buys coal, then oil, then uranium, and finally garbage.

**Addendum for »Korea« map:** The robot always chooses the resource market where he gets the resources to supply the most cities with energy. He still follows his rules on his puzzle tile for phase 3.

## Phase 4: Building

The robot must pay for all cities he builds, following the normal rules.

The robot chooses one city after the other and always finishes the building of one city including the payment, even if it would be cheaper for him to choose and pay all cities simultaneously. He always chooses the cheapest connection. If there are several cities with the same connection price, the robot decides randomly as described above.

## Phase 5: Bureaucracy

When supplying cities with energy, the robot follows the same rules as when buying resources. He always uses the resources to earn the most money with his power plants. If in doubt he always uses the cheapest resources, etc.

## The Different Puzzle Tiles

### Phase 1: The First City

- 1. LAST CHOICE:** in phase 4 of the first round, the robot builds his first city »last in player order« (independent of the player order). The »last player« chooses this city.
- 2. RANDOM CHOICE:** in Phase 4 of the first round, the robot builds his first city at random. First, the players randomly choose one of the available regions. Second, the players choose a random city in this region. If all 7 cities are still available for the robot, the »last player« chooses a city to be unavailable for the robot. Then, the players use all six colors to randomly choose the robot's first city.
- 3. EARLY CHOICE FOR ALL:** in phase 2 of the first round, after everybody (players and robot) has bought their first power plant, each player, in player order, chooses a city (beginning with the »first player«). Place an unused color on each chosen city. Then, the »first player« chooses one more city and puts a house of an unused color on it. In reverse player order (beginning with the »last player«) everybody must choose one of these cities, pay for it, and use it as his starting city. The robot chooses randomly. During the following phase 4 of the first round, everybody can build more cities according to the normal rules. When playing with two or more robots, remove this tile from the game before shuffling the puzzle tiles.
- 4. PLAYER'S CHOICE:** in Phase 4 of the first round, the players choose one city in player order (beginning with the »first player«). Place an unused color on each chosen city. The robot randomly chooses one of them as his starting city.
- 5. BIDDING CHOICE:** in Phase 4 of the first round, the players bid for the right to choose the robot's starting city. The winning bidder pays the robot the highest bid immediately, before the robot pays for his first city.
- 6. DECIDING CHOICE:** in Phase 4 of the first round, the players alternately choose cities, until only one is left. This is the starting city of the robot. Use houses of an unused color to mark the chosen cities.

### Phase 2: Auction Power Plants

- 1. »USING CHEAPEST RESOURCES«:** the robot only bids for the power plant that needs the cheapest resources. If there are several such power plants, he only bids for the power plant with the highest number. Maximum bid: Minimum bid + 5 Elektro.
- 2. BUYS THE FIRST CHOICE FOR MINIMUM BID:** the robot buys the first offered power plant for the minimum bid. There is no auction. If the robot must choose the power plant, the »first player« decides.
- 3. »SUPPLYING MOST CITIES«:** the robot only bids for the power plant supplying the most cities with energy. If there are several such power plants, he only bids for the power plant with the highest number. Maximum bid: Minimum bid + 10 Elektro.
- 4. »HIGHEST NUMBER«:** the robot only bids for the power plant with the highest number. Maximum bid: Minimum bid + number of his connected cities.
- 5. »SECOND SMALLEST«:** the robot only bids on the second smallest power plant. Maximum bid: Minimum bid.
- 6. ALL POWER PLANTS:** the robot bids on all power plants. If the robot chooses the power plant, the »last player« decides. Maximum bid: Minimum bid +1 Elektro.

### Phase 3: Buying Resources

- 1. NORMAL PRODUCTION AND »LESS THAN 5 ELEKTRO«:** the robot buys the resources for a normal production. Afterwards, he buys all resources with a price of less than 5 Elektro for which he has matching power plants and room to store the resources.
- 2. ALL RESOURCES:** the robot buys as many resources as possible. If he does not have enough money for this, he leaves the most expensive resources in the market.
- 3. »LAST«: ALL RESOURCES, OTHERWISE NORMAL PRODUCTION:** if the robot is »last in player order«, he buys as many resources as possible. Otherwise he only buys the resources for a normal production.
- 4. NORMAL PRODUCTION:** the robot only buys the resources for a normal production.
- 5. NORMAL PRODUCTION AND »LEAST AVAILABLE RESOURCES«:** the robot buys the resources for a normal production. Afterwards, he buys as much of the least available resource type as possible (1 uranium counts as 3 normal resources). If he cannot store the least available resource type or if several resources have the same number of tokens, he does not buy additional resources.
- 6. ODD TURN: NORMAL PRODUCTION, EVEN TURN: ALL RESOURCES:** in all odd turns the robot only buys the resources for a normal production. In all even turns he buys as many resources as possible. Players use two houses of an unused color to keep track of even or odd game turns.