NUCLEUM
PLAYER REFERENCE

GAMEPLAY AND TURN STRUCTURE

Players play continuous turns of **A / B / C** (below) with no rounds or phases. Track end game conditions (and score their points) until 2 (or 3 for 2p) of 5 are completed to end the game.

A. With an unused Action tile and a free slot, **play to the leftmost free slot at the top of your board.** You may resolve one or both tile actions (see reverse). You may complete only 1 Contract per turn, either before or after either action. Meet the requirements, gain the benefits, flip it face down, and place it next to your board (remove it from its contract spot).

B. With an available worker and unused Action tile (not a Special Directive), **play the tile to an empty rail space next to a city or other rail tile**—place your Worker on it. Check for color match conditions to activate bonus actions for all players with matches:

1. Adjacent space must be a city or occupied railway tile.
2. Matches the adjacent city color (or wild) or Praha.
3. Matches the adjacent tile's closest action color (or wild), even if it belongs to another player.)

Resolve the bonus actions in any order (all are optional). For other players, resolve in clockwise order after the acting player.

If a line of 2+ spaces is completed, all players with Workers receive the inauguration reward (per the length) on the main board. Finally, flip all tokens on the line to the railway side.

C. Recharge

1. Gain Income (Thaler/Workers/VP) per value left of the marker) and limited by the number of your action tiles played.
2. **Place your Milestone marker on the Milestone track**. Gain rewards, if any. If a Milestone space is now empty, perform a **King's Day Scoring**.
3. Discard all Achievement tokens you have collected.
4. Retrieve all the tiles from the top of your player board.

ADDITIONAL RULES

PLACING A MILESTONE MARKER

Your first 3 Milestone markers come from the Milestone spaces at the bottom of the side board, from left to right. Once you have used these 3 markers, you will take any additional ones from those placed next to the side board during setup.

Each player can only have 1 marker in each tier (disregarding 0 placements), but multiple players can be in the same space.

1. Determine your total of Achievement tokens.
2. Choose a space on the track with a value equal to or lower than your total, and place your marker there.

You may willingly choose to place your marker on "0" (bailout bonus of 2 Thaler and 1 Worker, but -3 VP at game end), but if you have Milestone markers in all tiers equal to or lower than your total (or your total is zero), then you must place on the "0". This is not part of any tier or milestone segment on the track.

3. If you place on a segment that still has a Nucleum present, place it on a power plant on the map and receive the bonus.
4. If you place on the top segment, gain a level 3 Technology.
5. If you place on the top space (40), immediately gain 9 VP.

PERFORMING A KING'S DAY SCORING

1. The owner of the highest Milestone marker on the Milestone track scores 6 VP. If there is a tie, all tied players score the same.
2. The owner of the second-highest Milestone marker on the Milestone track scores 2 VP. In a tie, all tied players score the same amount. Second place is scored even if first place is tied.

NETWORKS

A network is defined as a group of one or more cities including one or more adjacent links without empty spaces. Your networks are those where **at least one Railway tile or building within the network is owned by you**.

The **size of the network is the number of cities in this group** (not the longest path). Therefore, a single city with your Buildings/Mines/Turbines present but not connected to another network counts as a size 1 network. A single link tile (even if it's not part of a completed rail line) that touches a city also forms a network of size 1.

You may have one or more networks at any given time, and you may possibly connect two or more of your networks later in the game, creating a single bigger network instead.

END GAME & FINAL SCORING

END GAME CONDITIONS & PROCEDURE

As soon as ANY end game condition is met, the acting player moves the left-most condition marker onto the condition's space and scores 3 VP. If two conditions are met (three in a 2p game), continue so players have equal turns then **play one more turn**.

- Action tile draw stack is empty.
- Both the Silver and Gold Contract draw stacks are empty.
- All players have recharged 3 times (available Milestone marker spaces are empty).
- One or more players have unlocked all of their 8 Technologies.
- One or more players have reached 70 VP.

If players have Achievement tokens left, they may place a Milestone marker on the track without any effects or income.

- **MILESTONES**
  For each of your Milestone markers on the Milestone track, score 1 VP for each time you meet the condition shown on its segment's tile, multiplied by its multiplier. For each of your markers on the "0" space, lose 3 VP.

- **ULTIMATE GOAL TECHNOLOGY**
  If you have unlocked your 8th Technology, score this goal.

- **LEFTOVER RESOURCES**
  Score 1 VP per 2 Uranium in your Mines, 2 Workers in your supply, and 5 Thaler in your supply. Convert Uranium into Workers or Workers into Thaler before scoring for resources.

- **ENERGIZED BUILDINGS**
  For each of your energized Buildings, score the depicted number of VP. Energized Buildings in Praha score double.

  For energized Government Buildings, score points for all Buildings of the shown type — including itself, and those belonging to other players and regardless of whether they are energized or not — that are in the same network of yours as the Government Building in question.

- **INCOME TRACK BONUSES**
  Score 3/6/10 VP for each of your income tracks with an income marker on the last three spaces (indicated below).

ACTIONS

URBANIZE
Take an Urban Building tile of your choice from your player board, pay the cost shown on the left. Place it on an empty urban site in your network.

• If you have no networks due to having no pieces (Urban Buildings, Turbine, Mine, Railway tiles) on the board, you may build anywhere.

• Building at red sites costs an additional 2 Thaler.

• Regular (black) sites must show the type icon you are placing.

Friendly placement restriction: If possible, you must place the Building in a **single-type** space in the chosen city. Red sites do not affect and are not affected by this rule.

If the Action tile shows a discount icon, reduce the total amount to be paid by the amount shown.

Level-IV are Government buildings. They can be placed into a black space showing their column icon or a Government icon.

INDUSTRIALIZE
Take a Mine or a Turbine of your choice from your player board, pay the cost on the left, and place it on a corresponding space in your network.

Turbines: You may build a Turbine regardless of the presence of a Nucleum in the power plant.

Mines: When placing a Mine, **gain Uranium equal to the number of Mines you have on the board**, including the one just placed. If the mining site covered shows ⊞🟩, gain 1 additional Uranium. When gaining Uranium, place it in any of your Mines—not just the one recently built—each Mine is limited to 2 or 3 Uranium.

• If you have no networks on the map you may build anywhere.

• To place a Mine/Turbine in a red space, pay 2 Thaler. When using a Special Directive tile, use the discount to reduce this cost.

Mine+Turbine Pairing
Each Turbine pairs with a Mine on your board, shown with a connecting line. Once you have built a connected Turbine-Mine pair, gain the reward depicted on the connecting line.

If the Action tile shows a discount icon 🏭, pay 1 Worker fewer than the indicated cost.

If the Action tile shows ⊞🟩, gain 1 Uranium. This can be added to any of your Mines/networks, including this one, even if you used this action to build a Turbine. If you have no Mines or empty spaces on any of your Mines, gain 1 Worker instead.

You **must** resolve the action before or after gaining the Uranium.

CONTRACT
If you have an empty Contract space on your board, take one Silver or Gold Contract from the offer, and place it on an empty Contract space on the right side of your board, then receive reward shown on the Contract space.

If the Action tile shows ✖2, receive the shown reward twice.

Players cannot remove or replace Contracts on their board, nor keep Contracts in hand or place them later. After taking a Contract, draw a new Contract of the same color from the respective draw pile to refill the empty space. If there are no more of that color, draw a tile of the other color. If there are none remaining, leave the space empty. Purple Contracts are only fulfilled directly from the side board.

ENERGIZE
1. Select one power plant on the map.

2. If necessary (see below), transport Coal/Uranium from locations via completed rail lines (of any player) to this plant.

It is possible to energize a building without being connected to Coal/Uranium if you have passive energy from Turbines or Technology. The building must still be connected to the plant.

Coal: Import from any import sites, then transport it. For each imported coal, pay the cost on a Coal Import Wagon in the area. Flip the tile to its 2 Thaler side or, if there are none left, remove it from the game to reveal the 3 Thaler cost.

You can import coal only if the selected power plant is connected to one or both coal import areas via completed rail lines (owned by any player) and a long-distance rail. There is no limit to the amount of coal that you can import, and you can import coal from all connected coal import areas at the same time as long as they are connected to your selected power plant.

You may use a Special Directive tile and/or Turbine effect discount to apply the total reduction in cost to amount spent on Coal (and not to the cost of importing each individual coal).

Uranium: Transport up to the allowed amount (# of Turbines present) from Mines connected by complete rail lines to the plant. Pay other players 1 Thaler if they own the Turbines, minus any discounts but still pay the owner from the supply.

3. Determine the amount of electricity produced.
   • 1 per 1 transported coal
   • 2 per 1 transported Uranium
   • **any depicted on the used Action tile**
   • **any from your built Turbines**
   • **any provided by your active Technologies**

4. Select a connected Urban Building (yours/Neutral) that requires this amount of electricity or less.

5. Gain Achievement tokens per the electricity required for the Building, then flip the Building to its energized side.

GAINING TECHNOLOGIES
Upon gaining a Technology as a reward, you must immediately unlock a single Technology or gain VP equal to the level.

Select one whose level is equal to or less than the level of the reward. Slide it to the right into its slot on the Experiment board.

Immediate Abilities [blue]: You must either resolve the effect entirely when you unlock it or forfeit it. Flip it after use.

Ongoing Abilities [brown]: These have a trigger on the left side and a benefit/action modifier on the right side. Every time you meet the condition, you gain the benefit.

Ultimate Goal [purple]: If unlocked, your 8th Technology provides VP scored at the end of the game per its condition.

DEVELOP
Purchase one Action tile from the market. Pay the amount indicated (minus any action tile discount). Pay 2 Thaler to repeat this. After this, tiles to the right to close the gap, and refill the empty spaces.

SUBSIDIZE

Icon	Effect
1/2	Gain 2 Thaler OR 1 Worker.
1 ▶	Advance Thaler income marker by 1.
1 ▶	Advance Worker income marker by 1.
1 ▶	Advance VP income marker by 1.
1	Gain 1 Achievement token.
1? ▶	Advance any income marker by 1.
1? ▶ (-1)	Pay 1 Thaler to advance any income marker by 1