

## UN Energy Summit A Game in Sixteen Parts

### To Win:

There are four ways to win the UN Energy Summit Game:

1. Create the largest society at the end of four rounds by collecting the most Growth Points.
2. Produce the most energy from Sustainable Energy at the end of four rounds by collecting the most Sustainable Energy points.
3. Have the greatest percent increase in Sustainable Energy at the end of four rounds by tracking the amount of Sustainable Energy points gained after each round
4. Have the greatest percent reduction of Pollution Points at the end of four rounds by tracking the amount of Pollution Points at the end of each round.

### Achievements:

There are four achievement awards that can be earned during game play:

1. Peacemaker - prevent an attack on another country by brokering a two or three way deal.
2. Media Consultant - create and present a commercial that is judged by the IMF to be particularly good.
3. Stock Broker - make the maximum number of trades possible in all four rounds.
4. Representative Status - play your role really well. Impress the IMF with costumes and character!

### Before the Game:

#### Resource Distribution

Each country will receive four types of resource cards

1. Money - each country will receive Game Money according to the following formula: 1GD (Game Dollar) = 10 billion of GDP calculated in US dollars for the year 2013. For example, in France the GDP in 2013 was 2.735 trillion dollars, so in the game France will receive 274 GD.

2. Non-renewable Power. Each country will receive 1 non-renewable power card for every 25 Mtoe non-renewable power units their country produced in 2013 or 2014. Use the following formula to calculate the number of non-renewable power cards:

$$(\text{Total Mtoe} * \% \text{ of non-renewable energy}) / 50 = \text{number of NRP cards}$$

3. Renewable Power Cards. Each country will receive 1 renewable power card for every 5 Mtoe of renewable power the country produced in 2013 or 2014. Use the following formula to calculate renewable power cards:

$$(\text{Total Mtoe} * \% \text{ renewable energy}) / 20 = \text{number of RP cards}$$

4. Pollution Cards. Each country will receive one Pollution Card for every 5 Megatons of CO<sub>2</sub> output/year. Calculate PC with the following formula:

$$(\text{Mt of CO}_2 / 50) = \text{number of PC cards}$$

5. Each country will receive one Battle Card, one Embargo Card, one Smuggler Card, and one Summit Card. See Additional Game playing options for details about these cards.

## Game Play:

The game will take place in 4 scheduled rounds. Each round will last 45 minutes and be broken up as follows:

1. (20-25 minutes) Country introductions - each country will have up to 5 minutes to give its commercial presentation and attempt to portray itself as a positive trading partner.

2. (10-15 minutes) Trading. Countries will need to make deals and trade. All trades must be tracked on each country's Trading Ledger. Deals are final when the trade representatives initial the ledger in the space provided. In a single round, each country can make a maximum of 3 trades. In a single round each country must make a minimum of 1 trade.

3. (5 minutes) Reporting. Countries will need to report into the IMF Bank representative to register all trades and final card totals at the end of the round. The IMF banker will tally these in the Master Trade Sheet.

3a. The IMF representative will also look for and assign any applicable penalties during the trading round. Failure to make a trade will result in the addition of 2 PCs and the loss of  $\frac{1}{4}$  of the country's current money

3b. The IMF representative will also look for and assign any applicable penalties for a successful or unsuccessful attack cards that were played that round.

## Additional Game Playing Options:

1. Call a Summit! Once per round each country can call a summit with up to 2 other countries. During a summit, only the invited countries can participate in the trade talked for 1 minute. The invited countries can move to a different part of the room to negotiate. Countries can refuse the invitation if they wish.

2. Call for an Embargo! During the game each country can call for a one round embargo against another country. During an embargo, the targeted country cannot negotiate or trade for 5 minutes. Once a country has called for an embargo, the IMF representative will mark this on the the Master Trade Sheet by highlighting in yellow that country's final tally for the round.

3. Smuggler! During the game each country can make ONE trade with a country between rounds. They must report this trade to the IMF representative for their next round. The representative will mark this on the Master Trade Sheet by highlighting in blue that country's final tally for the round.

4. Attack! During the game each country has one opportunity to try to force another country to agree to a trade by battling them. To begin a battle, the attacking team must inform the IMF representative that they wish to battle. The IMF representative will hear the proposed trade terms as witness and to be sure they meet the conditions of the battle option.

### Conditions of Battle:

- The battle trade must be a trade; something must be both given and received by both countries.
- The battle trade cannot force any country to lose more than 50% of any type of resource card.

Once battle is begun, it is decided based on the roll of a 20 sided die applied to the formula below. If the attacking country *loses* (that is, the defenders have the highest number after completing the formula), they must pay the bank  $\frac{1}{4}$  of their remaining money and *gain* one Pollution Card.

$$(\text{\#of RP cards} * 3) + (\text{\# of NRP cards} * 2) + \text{Roll of Die} = \text{Attack Power}$$

## Between Playing Rounds

1. (10 minutes) Countries can go to the IMF main bank to buy or sell Growth Points. Growth Points will be sold according to the following formula:

Round 1: 1GP for 4 NRP  
1 GP for 2 RP  
1 GP for 100\$ GM

Round 2: 1GP for 5 NRP  
1 GP for 3 RP  
1 GP for 125\$ GM

Round 3: 1GP for 6 NRP  
1 GP for 4 RP  
1 GP for 150\$ GM

Round 4: 1GP for 6 NRP  
1 GP for 4 RP  
1 GP for 200\$ GM

2. Countries can purchase non-renewable energy sources from the IMF between rounds

Round 1: 1NRP for 50\$

Round 2: 1NRP for 60\$

Round 3: 1NRP for 75\$

Round 4 1NRP for 80\$

3. Countries can purchase renewable energy sources from the IMF between rounds.

Round 1: 1RP for 100\$

Round 2: 1RP for 90\$

Round 3: 1RP for 80\$

Round 4: 1RP for 60\$

4. The effects of pollution cards.

a. The price of GP increases by 10\$ for every PC the country has.

b. The country gains one PC for every two NRP cards the country has. Round down.

## Glossary:

Mtoe - Million tons of oil equivalent. This is a unit of measuring energy production and consumption.

NRP - Non-renewable power. This includes coal, oil, natural gas, and nuclear power.

PC - Pollution Cards. We will be measuring pollution in Megatons of CO<sub>2</sub> as is available from the IEA statistics

RP - Renewable power. This includes wind power, hydro power, solar power, and biomass.

## Materials needed:

Pollution Cards

Money

RP cards

NRP cards

Summit! Cards

Embargo! Cards

Smuggler! Cards

Attack! Cards

20 Sided Die

Master Trade Sheet - done

Trade Sheets