

## **Invention Disclosure Form (IDF) -B – A Guide to Describing Your Innovation**

### **1. Title of the invention:**

Example: Solar-Powered Backpack with Integrated Water Purification System

### **2. Field / Area of invention:**

Example: Renewable energy, outdoor recreation, water purification

### **3. Prior Patents and Publications (Table summarizing prior art):**

Patent/Publication	Description	Relevance to your invention
US Patent 6,540,788 (Cite related Indian and other countries patents)	Backpack with solar panels	Provides solar charging for portable devices
Journal of Membrane Science 482 (2015)	Portable UV water purification system	Offers water purification but not integrated with a backpack

### **4. Summary and background of the invention (Address the gap/Novelty):**

Briefly describe the problem your invention addresses.

Explain existing solutions and their limitations.

Highlight the novelty and advantages of your invention.

Example: Existing solar-powered backpacks lack integrated water purification capabilities, and portable water purifiers are often bulky and inconvenient. This invention addresses these limitations by combining solar panels with a UV water purification system within a backpack, enabling off-grid adventurers to generate power and purify water simultaneously.

### **5. Objective(s) of Invention:**

What are you hoping to achieve with your invention?

What specific goals does it address?

Example: 1.To provide a self-sufficient backpack for outdoor activities. 2. To offer clean drinking water during travel and in remote locations. 3. To promote sustainable energy use by harnessing solar power.

## **6. Working principle of the invention (in brief):**

Briefly explain how your invention works without going into too much technical detail.

Example: Solar panels on the backpack convert sunlight into electricity, stored in a battery. This powers the UV water purification system integrated within the backpack's water reservoir. Users simply fill the reservoir with water from any source, activate the UV system, and clean drinking water is dispensed through a dedicated tap.

## **7. Description of the invention in detail (Include drawings and/or photographs as needed):**

Provide a more detailed explanation of your invention's components and functionality.

Include any relevant diagrams, sketches, or pictures to enhance understanding.

Example: Provide a detailed explanation of the components, materials, and functionalities of the backpack and water purification system. Include labeled diagrams or photos illustrating the layout, connections, and operational flow.

## **8. Experimental validation results:**

Describe any tests or experiments conducted to validate the effectiveness of your invention.

Share the results and their significance.

Example: Describe tests conducted to verify the efficiency of solar power generation, water purification effectiveness, and overall functionality of the invention. Present data and results demonstrating the invention's performance against stated objectives.

## **9. What aspect(s) of the invention need(s) protection?**

Identify the specific features or functionalities you want to protect through patents or other intellectual property means.

Example: Specify the unique features and functionalities of your invention that you wish to protect through patent or intellectual property rights. This could include specific components, the combination of elements, or the overall operating principle.

**10. What is Technology readiness level of your invention? (Tick the appropriate TRL)**

Research			Development			Deployment		
TRL 1	TRL 2	TRL 3	TRL 4	TRL 5	TRL 6	TRL 7	TRL 8	TRL 9
Basic Principles observed	Technology concept formulated	Experimental proof of concept	Technology validated in a lab	Technology validated in a relevant environment (industrially relevant in case of key enabling technologies)	Technology demonstrated in a relevant environment (industrially relevant in case of key enabling technologies)	System prototype demonstration in an operational environment	System complete and qualified	Actual system proven in an operational environment (competitive manufacturing in case of key enabling technologies, or in space )

**Note:** This is just a template, and the specific details you include will vary depending on your invention. Be sure to provide complete and accurate information to effectively describe your invention.