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# Energy Capacity



EDIT

*Unused Mod Capacity increases the Warframe's Energy at the start of missions.*

> Start missions with **|AMOUNT|** Energy

> Energy recovers at **|AMOUNT|** per second

—In-game Description

**Energy** of a [Warframe](#) is a resource used mainly to cast [abilities](#).

Warframes have 4 abilities that at base, cost up to 100 energy to cast. Almost every Warframe has their own energy-pool with varying capacities depending on the types and costs of their various abilities, with the exceptions of  [Hildryn](#).

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energy but instead using a cooldown system.

Like [health](#) and [shields](#), a

Warframe's energy capacity scales with their rank and through the use

of mods or buffs. It is also worth

noting that the words "power" and "energy" are often used interchangeably by members of the community.

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## Increasing Energy Capacity

### Mods



[Endurance Drift](#)



[Flow](#)



[Primed Flow](#)



[Archon Flow](#)





 [Auxiliary Power](#)



 [Adrenaline Boost](#)

These are the only mods currently in the game that increase energy capacity. It is worth noting that  [Flow](#),  [Primed Flow](#), and  [Archon Flow](#) cannot be used together.  [Auxiliary Power](#) only works on [Archwings](#), and  [Adrenaline Boost](#) in [Conclave](#).

## Formula For Modded Energy Capacity

These mods increase the energy capacity of a Warframe with the following the formula:

$$\text{Energy}_{total} = \text{Energy}_{max} + (\text{Energy}_{base} \times \text{Mod Multiplier})$$

So taking  [Volt Prime](#) as an example, with 200 base energy and 300 max energy he will have:

- With  [Flow](#):  $300 \times (1 + 1.0) = 600$
- With  [Primed Flow](#):  $300 \times (1 + 1.85) = 855$
- With  [Primed Flow](#) and  [Endurance Drift](#):  $300 \times (1 + 1.85 + 0.10) = 885$

## Bufs

The only buff currently available to increase energy capacity is [Cephalon Suda's Entropy](#) effect. Entropy will release a 25-meter [AoE radial attack](#) around the player, dealing 1000  [Magnetic](#) damage and applying the Magnetic [Status Effect](#) to enemies in range, increasing damage dealt to their shields. It will also restore 25% of the player's base Energy, and provide a (base) Energy boost of +25% for 30 seconds.



[Entropy Spike](#)

[Entropy Flight](#)

[Entropy Burst](#)

[Entropy Detonation](#)

[Synoid Gammacor](#)

[Synoid Simulor](#)

## Arcane Helmets

These [Arcane Helmets](#) are retired helmets that in the past used to grant increased energy capacity to their respective Warframes.



[Ash Locust Helmet](#)[Banshee Reverb Helmet](#)[Ember Phoenix Helmet](#)[Mag Gauss Helmet](#)[Vauban Esprit Helmet](#)

## Azure Archon Shard

The Azure [Archon Shard](#) is a guaranteed reward from defeating [Archon Boreal](#) that can provide a flat increase to Energy Capacity after all bonuses are taken into account. Regular Shards provide **50** additional Energy Max, while Tauforged Shards provide **75**.

Archon Shards can only be obtained through [Archon Hunts](#), which are unlocked after completing [Veilbreaker](#),



completing [Whispers in the Walls](#), and [Deep Archimedeia](#), after obtaining Rank 5 for the [Cavia](#) Syndicate

## Starting Energy

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**Starting Energy** refers to how much energy a Warframe starts a mission with, when reviving from [Death](#), or going through a [Sanctuary Onslaught](#) conduit.



Warframe ↕	Starting Energy (energy on spawn) ↕	Rank 0 Energy Capacity (base capacity) ↕	Rank 30 Energy Capacity (after ranking bonus applied) ↕
<a href="#">Ash</a>	50	100	150
<a href="#">Ash Prime</a>	50	100	150
<a href="#">Atlas</a>	50	175	225
<a href="#">Atlas Prime</a>	75	215	265
<a href="#">Banshee</a>	100	175	225
<a href="#">Banshee Prime</a>	125	215	265
<a href="#">Baruuk</a>	150	200	300
<a href="#">Baruuk Prime</a>	150	200	300
<a href="#">Caliban</a>	75	140	190
<a href="#">Chroma</a>	75	175	225
<a href="#">Chroma Prime</a>	100	200	300
<a href="#">Citrine</a>	50	130	180
<a href="#">Dagath</a>	50	175	225
<a href="#">Dante</a>	50	200	270
<a href="#">Ember</a>	75	175	225
<a href="#">Ember Prime</a>	75	175	225
<a href="#">Equinox</a>	100	175	225
<a href="#">Equinox Prime</a>	115	200	250
<a href="#">Excalibur</a>	50	100	150
<a href="#">Excalibur Prime</a>	100	175	225
<a href="#">Excalibur Umbra</a>	100	175	225
<a href="#">Frost</a>	50	100	150



Warframe ↕	Starting Energy (energy on spawn) ↕	Rank 0 Energy Capacity (base capacity) ↕	Rank 30 Energy Capacity (after ranking bonus applied) ↕
<a href="#">Gara</a>	75	175	225
<a href="#">Gara Prime</a>	75	175	225
<a href="#">Garuda</a>	50	140	240
<a href="#">Garuda Prime</a>	100	220	320
<a href="#">Gauss</a>	100	175	225
<a href="#">Gauss Prime</a>	100	175	225
<a href="#">Grendel</a>	100	175	225
<a href="#">Grendel Prime</a>	115	200	250
<a href="#">Gyre</a>	100	190	240
<a href="#">Harrow</a>	50	100	150
<a href="#">Harrow Prime</a>	125	140	190
<a href="#">Hildryn</a>	0	0	0
<a href="#">Hildryn Prime</a>	0	0	0
<a href="#">Hydroid</a>	75	140	190
<a href="#">Hydroid Prime</a>	100	175	225
<a href="#">Inaros</a>	50	100	150
<a href="#">Inaros Prime</a>	75	140	190
<a href="#">Ivara</a>	75	215	265
<a href="#">Ivara Prime</a>	100	250	300
<a href="#">Jade</a>	125	150	200
<a href="#">Khora</a>	75	140	190
<a href="#">Khora Prime</a>	100	175	225
<a href="#">Kullervo</a>	150	175	225
<a href="#">Lavos</a>	0	0	0



Warframe ↕	Starting Energy (energy on spawn) ↕	Rank 0 Energy Capacity (base capacity) ↕	Rank 30 Energy Capacity (after ranking bonus applied) ↕
<a href="#">Limbo Prime</a>	125	215	265
<a href="#">Loki</a>	100	175	225
<a href="#">Loki Prime</a>	125	215	265
<a href="#">Mag</a>	75	140	190
<a href="#">Mag Prime</a>	100	215	265
<a href="#">Mesa</a>	50	100	150
<a href="#">Mesa Prime</a>	65	140	190
<a href="#">Mirage</a>	125	175	225
<a href="#">Mirage Prime</a>	125	175	225
<a href="#">Nekros</a>	50	100	150
<a href="#">Nekros Prime</a>	75	140	190
<a href="#">Nezha</a>	125	175	225
<a href="#">Nezha Prime</a>	125	175	225
<a href="#">Nidus</a>	50	100	150
<a href="#">Nidus Prime</a>	75	140	190
<a href="#">Nova</a>	100	175	225
<a href="#">Nova Prime</a>	150	215	265
<a href="#">Nyx</a>	100	175	225
<a href="#">Nyx Prime</a>	150	175	225
<a href="#">Oberon</a>	75	175	225
<a href="#">Oberon Prime</a>	100	215	265
<a href="#">Octavia</a>	100	175	225
<a href="#">Octavia Prime</a>	100	215	265
<a href="#">Protea</a>	50	175	225



Warframe <span>↕</span>	Starting Energy (energy on spawn) <span>↕</span>	Rank 0 Energy Capacity (base capacity) <span>↕</span>	Rank 30 Energy Capacity (after ranking bonus applied) <span>↕</span>
<a href="#">Qorvex</a>	50	150	200
<a href="#">Revenant</a>	50	140	190
<a href="#">Revenant Prime</a>	100	175	225
<a href="#">Rhino</a>	50	100	150
<a href="#">Rhino Prime</a>	50	100	150
<a href="#">Saryn</a>	50	175	225
<a href="#">Saryn Prime</a>	100	200	300
<a href="#">Sevagoth</a>	75	140	190
<a href="#">Sevagoth Prime</a>	100	175	225
<a href="#">Styanax</a>	50	175	225
<a href="#">Titania</a>	100	175	225
<a href="#">Titania Prime</a>	125	215	265
<a href="#">Trinity</a>	75	175	225
<a href="#">Trinity Prime</a>	125	175	225
<a href="#">Valkyr</a>	50	100	150
<a href="#">Valkyr Prime</a>	100	175	225
<a href="#">Vauban</a>	75	175	225
<a href="#">Vauban Prime</a>	100	175	225
<a href="#">Volt</a>	50	100	150
<a href="#">Volt Prime</a>	125	200	300
<a href="#">Voruna</a>	50	100	150
<a href="#">Wisp</a>	150	200	300
<a href="#">Wisp Prime</a>	150	200	300



Warframe ↕	Starting Energy (energy on spawn) ↕	Rank 0 Energy Capacity (base capacity) ↕	Rank 30 Energy Capacity (after ranking bonus applied) ↕
<a href="#">Wukong Prime</a>	65	145	195
<a href="#">Xaku</a>	50	160	230
<a href="#">Yareli</a>	50	200	300
<a href="#">Zephyr</a>	50	100	150
<a href="#">Zephyr Prime</a>	75	175	225

## Formula

Starting Energy can be increased with unspent [mod](#) capacity.

The formula followed is:

$$\text{Final Starting Energy} = \text{Starting Energy} + 5 \times \text{Free Mod Capacity}$$

When [Preparation](#) is equipped, the formula becomes:

$$\text{Final Starting Energy} = \text{Starting Energy} + 5 \times \text{Free Mod Capacity} + (\text{Energy Total})$$

## Mods

[Preparation](#)

[Follow Through](#)

## Effective Energy Capacity

Calculating Effective Capacity



Similarly to how one can define the concept of "[Effective Health](#)" by weighting the number of hit-points with the corresponding damage reduction, one can also define the concept of casting effective energy capacity by weighting the energy capacity using the [Ability Efficiency](#) factor:

$$\text{Effective Energy Capacity}_{\text{casting}} = \frac{\text{Energy Capacity}}{2 - \text{Ability Efficiency}}$$

Since casting cost can not be reduce under 25% of the base cost, the highest possible upper-bound for the effective energy capacity is:

$$\text{Effective Energy Capacity} \leq 4 \times \text{Energy Capacity}$$

## Toggle Effective Capacity

Since the efficiency of toggle abilities depends also on the duration, in that case the formula becomes:

$$\text{Effective Energy Capacity}_{\text{toggle}} = \frac{\text{Energy Capacity} \times \text{Ability Duration}}{2 - \text{Ability Efficiency}}$$

For the case where no energy is recovered and a constant rate of energy is drained, one can also consider the effective toggle duration as follows:

$$\text{Effective Toggle Duration} = \frac{\text{Effective Energy Capacity}_{\text{toggle}}}{\text{Base Drain Rate}}$$

$$\text{Effective Toggle Duration} = \frac{\text{Energy Capacity} \times \text{Ability Duration}}{\text{Base Drain Rate}(2 - \text{Ability Efficiency})}$$

$$\text{Effective Toggle Duration} = \frac{\text{Energy Capacity}}{\text{Modified Drain Rate}}$$

Due to the definition of the terms, there are many ways in-which the formula for effective toggle duration can be expressed.

Apart from toggle duration, this can be used to work out the effective duration granted per energy pick up.

## Examples

Suppose a [Prowling](#) [Ivara](#) has a modded drain of 0.25 energy/sec. An orb of 50



$$\frac{50}{0.25} = 200 \text{ seconds}$$

Considering the same Ivara with full energy pool of 744 capacity, she can remain in prowl for:

$$\frac{744}{0.25} = 2,976 \text{ seconds} \approx 50 \text{ minutes}$$

## Restoring Energy

Energy does not naturally regenerate over time unless the [Energy Siphon](#) aura mod is equipped by at least one member of the [squad](#). Otherwise, energy must be restored either by picking up [Energy Orbs](#) (and [Health Orbs](#) with [Equilibrium](#)) or by a few other means. [Trinity](#) and [Harrow](#) are the two Warframes with an inherent ability to explicitly restore energy to all Warframes within the squad, and [Nekros](#) can [Desecrate](#) nearby corpses for a chance to drop more Energy Orbs. [Limbo](#) has, and grants, access to the [Rift Plane](#), a dimension in which Warframes regenerate energy over time consistently. The [Zenurik](#) Focus tree grants the [Energy Pulse](#) and [Wellspring](#) abilities; the former being a passive that restores additional energy over-time when picking up Energy Orbs, and the latter being an active ability that creates a dome that restores energy over-time to all Warframes that walk through it.

Two other mods can allow for what can be significant energy restoration by converting a portion of the damage received by enemy attacks on a Warframe's Health into energy: [Hunter Adrenaline](#) and [Rage](#). However, these are obviously very risky for many frames and are only suitable for those that are rather "health-tough" with strong base Health, Armor and self-healing; frames that typically rely on constant Stealth or a Shield-Gating defense will not be able to benefit much from these mods.

Besides the [Entropy](#) effect from [Cephalon Suda](#), the [Blight](#) effect from [Red Veil](#) also restores 25% of the player's base energy, and provides a base movement speed boost of +10% for 30 seconds. [Squad Energy Restores](#) are [consumables](#) that can grant energy to nearby teammates in varying amounts, up to 400 total. When using a [Prime](#) Warframe, moving close to a [Death Orb](#) will cause it to release a radial wave that restores 250



energy to all nearby Warframes within a small radius, this effect can only occur once per orb.

It is important to note that on most occasions, toggled abilities disable energy generation from team abilities, consumables, or passive regeneration methods. Some exceptions to this are [Chroma](#) ( [Spectral Scream](#) and [Effigy](#)) and partially [Equinox](#) ( [Pacify & Provoke](#) and [Mend & Maim](#)).

**\*\*\*Casting any abilities will temporary stop any passive energy regeneration methods from working, due to the the "drain" needs to be accounted for, it is suspected that this draining is coded to be treated like any toggled/channeled abilities.** Frames that casts frequently will benefit from passive energy regeneration far lesser than those who casts lesser due to this mechanic.

## Abilities

[Equinox](#) [Garuda](#) [Gauss](#) [Gyre](#) [Harrow](#) [Helminth](#) [Limbo](#) [Octavia](#)

### Equinox's Passive

Edit

When [Equinox](#) collects Health Orbs or Energy Orbs, **10%** of the restored amount is converted into additional Energy and Health respectively.

- This effect stacks with [Equilibrium](#) for up to **120%** conversion.

Aside from the aforementioned abilities, there are a few others that have varying chances to drop/spawn Energy Orbs which can be picked up by anyone in a squad.

[Hildryn](#) [Nekros](#) [Nezha](#) [Protea](#)

	<b>Aegis Storm</b>	
	Take the skies and rain Balefire rockets down on the enemy.	<b>Strength:</b> 100 / 125 / 150 / 200 ( <a href="#">Radiation</a> damage per second)
<b>4</b>	Nearby enemies are blasted into the air where they will create an Energy Orb every few seconds. When shields run out the	100 / 300 / 400 / 500 ( <a href="#">Impact</a> damage on deactivation)
<b>100</b>		<b>Duration:</b> N/A
<b>+25/s</b>		<b>Range:</b>
<b>+25/s/enemy</b>		
<b>+50/dodge</b>		



enemies are smashed into the ground. 8 / 10 / 12 / 15 m (energy field max radius)

**Misc:**

Introduced in [Update 24.4](#) (2019-03-08) 8-18 s (energy orb drop interval)

While not restoring energy directly nor indirectly, [Grendel](#) has the unique ability to increase energy gained from all sources and methods mentioned so far, this affects the Warframe itself and allies.

**Nourish**

Regenerate health as Grendel absorbs nourishment from enemies in his gut. While he digests, enemies that attack or are attacked by Grendel suffer Viral Damage and energy sources provide more energy. These buffs extend to squad mates.

**2**  
**50**

Introduced in [Update 26.0](#) (2019-10-31)

**Strength:**

20% (damage on digestion)  
600 / 700 / 800 / 1000 (self heal on cast)  
1.5 / 1.65 / 1.8 / 2 x (energy multiplier)  
100 / 150 / 200 / 250 (Viral damage on hit)  
+40% / +50% / +60% / +75% (Viral damage buff)

**Duration:**

10 / 15 / 20 / 25 s (buff duration)

**Range:**

10 / 15 / 20 / 25 m (buff radius)  
12 m (splash radius)

**Misc:**

10 (Viral status stacks)  
2 s (explosion cooldown)

**Subsumable to Helminth**

**Mods**

- [Warframes](#)
- [Weapons](#)
- [Archwing](#)
- [Augments](#)
- [Companions](#)
- [Conclave](#)



[Dreamer's Bond](#)

[Energy Nexus](#)

[Energy Siphon](#)

[Equilibrium](#)

[Hunter Adrenaline](#)

[Rage](#)

## Arcanes



[Arcane Energize](#)

[Emergence Dissipate](#)

[Exodia Brave](#)

[Primary Exhilarate](#)

## Energy Reduction

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[Sorties](#) with the *Energy Reduction* condition is the only way to reduce a Warframe's Total Energy capacity. This also reduces passive energy regeneration effects, like [Energy Siphon](#) and [Zenurik](#)'s abilities.

There are also some instances where a Warframe's energy can be expended and/or stopped from regenerating. [Nightmare Mode](#)'s *Energy Drain* condition slowly drains 15 energy per second throughout the mission. On top of its regular effects, a [Magnetic proc](#) will drain 90 energy over 3 seconds, or 30 energy per tick. In [Conclave](#), [No Current Leap](#) nullifies passive energy regeneration in exchange for increased mobility.

## Using Energy as Health

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### Mods



[Gladiator Finesse](#)

[Quick Thinking](#)

These mods stop lethal damage by allowing hits to drain your energy after your [Health](#) is depleted in exchange for occasionally staggering the player. They synergize extremely well with [Rage](#) and [Hunter Adrenaline](#) since all the health drained before taking lethal damage would ensure that there is enough energy for the mods to consume.

## Patch History

### Update 35.0 (2023-12-13)

- Increased the Starting Energy of the following Prime Warframes so that they have higher Energy Capacity compared to their base version:
  - Grendel Prime from 100 to 115
  - Inaros Prime from 50 to 75
  - Ivara Prime from 75 to 100
  - Khora Prime from 75 to 100
  - Limbo Prime from 100 to 125
  - Nidus Prime from 50 to 75

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	<b>PvP</b>	Duel • Conclave (Lunaro) • Frame Fighter
	<b>Other</b>	Gravity • Threat Level
<b>Equipment</b>	<b>Modding and Arcanes</b>	Arcane Enhancements • Archon Shard • Fusion • Mods (Flawed, Riven) • Polarization • Transmutation • Valence Fusion
	<b>Warframe</b>	Attributes (Armor, <b>Energy</b> , Health, Shield, Sprint Speed) • Abilities (Augment, Casting Speed, Helminth System, Passives, Duration, Efficiency, Range, Strength)
	<b>Weapons</b>	Accuracy • Alternate Fire • Ammo • Area of Effect • Attack Speed • Bounce • Critical Hit • Damage Falloff • Exalted Weapon • Fire Rate • Hitscan • Holster • Incarnon • Melee • Multishot • Noise • Projectile • Projectile Speed • Punch Through • Recoil • Reload • Ricochet • Trigger Type • Zoom



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