


# Project Brief

## Sustainable Infrastructure CI

**TIMELINE:** April 1 2023 – ???

**BUDGET:** Volunteer Funded

PROBLEM:	<ul style="list-style-type: none"><li>Recently I configured some cloud storage at work using Terraform</li><li>The configuration I created could have been much more environmentally friendly<ul style="list-style-type: none"><li>It could have been configured with less replication</li><li>It could have been configured to be in a low carbon region</li></ul></li><li>I didn't notice this mistake until later and now it is difficult to change</li></ul> <pre>resource "google_storage_bucket" "my_bucket" {   name     = var.bucket_name   location = "EU"   storage_class = "STANDARD"   versioning {     enabled = true   } }</pre>
SOLUTION:	<ul style="list-style-type: none"><li>A Github action that fails your Terraform changes when resource configurations could be easily made more environmentally friendly</li><li>The Github action can be configured to only suggest changes that increase price by a configurable percentage</li><li>The action suggests the best configuration so the fix can be easily applied</li></ul>  <pre>Error: Not equal: expected: "europe-west6" actual  : "EUROPE-WEST4"  Diff: --- Expected +++ Actual @@ -1,1 @@ -europe-west6 +EUROPE-WEST4 TestTerraformGcpExample Messages: Resource of type google_storage_bucket with name terratest-gcp-exam ple-vvcg6v is being created in region europe-west4, but it should be created in region europe-west6 to reduce carbon emissions.</pre>
TRACTION:	<ul style="list-style-type: none"><li>To jumpstart growth we will identify potential users on Github using repository search</li><li>We will solicit potential users directly (likely using Github issues) to onboard the Github action</li><li>In some cases we will perform the integration work needed to onboard users (but we prefer them to perform that work)</li></ul>
GROWTH:	<ul style="list-style-type: none"><li>Potential users will discover Sustainable Infrastructure CI by visiting Github repositories that are onboarded and. seeing our Github badge.</li></ul> <div><b>Sustainable Infrastructure</b> <b>Grade A</b></div>