

ANEXOS

ANEXO A

Esta macro tiene como objetivo agrupar en columnas los valores descargados de Renewables.ninja que vienen separados por comas. Además, cambia el separador decimal de punto a coma para poder tratar los datos en Excel. Por último, realiza el sumatorio de todas las potencias de salida, calculando así la potencia total anual generada en los paneles solares.

```
Sub FORMATO()  
'  
' FORMATO Macro  
'  
'  
Columns("A:A").ColumnWidth = 55.57  
Range("A2:A8953").Select  
Selection.TextToColumns Destination:=Range("A2"), DataType:=xlDelimited, _  
TextQualifier:=xlDoubleQuote, ConsecutiveDelimiter:=False, Tab:=False, _  
Semicolon:=False, Comma:=True, Space:=False, Other:=False, FieldInfo _  
:=Array(Array(1, 1), Array(2, 1), Array(3, 1), Array(4, 1), Array(5, 1), Array(6, 1)), _  
DecimalSeparator:=".", ThousandsSeparator:="," TrailingMinusNumbers:= _  
True  
Range("A1:F3").Select  
Range("A3").Activate  
Selection.Font.Bold = True  
Columns("A:F").Select  
With Selection  
    .HorizontalAlignment = xlCenter  
    .VerticalAlignment = xlBottom  
    .WrapText = False  
    .Orientation = 0  
    .AddIndent = False  
    .IndentLevel = 0  
    .ShrinkToFit = False  
    .ReadingOrder = xlContext  
    .MergeCells = False  
End With  
With Selection  
    .HorizontalAlignment = xlCenter  
    .VerticalAlignment = xlCenter  
    .WrapText = False  
    .Orientation = 0  
    .AddIndent = False  
    .IndentLevel = 0
```

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        .ShrinkToFit = False
        .ReadingOrder = xlContext
        .MergeCells = False
    End With
    Selection.ColumnWidth = 38.57
    Selection.ColumnWidth = 31.43
    Columns("A:F").Select
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone
    With Selection.Borders(xlEdgeLeft)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeTop)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeBottom)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeRight)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideVertical)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideHorizontal)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    Selection.ColumnWidth = 25.57
    Rows("1:3").Select
    Selection.RowHeight = 20.25
    Range("A1:F1").Select
    With Selection
        .HorizontalAlignment = xlCenter
        .VerticalAlignment = xlCenter
        .WrapText = False
        .Orientation = 0
        .AddIndent = False
        .IndentLevel = 0
        .ShrinkToFit = False
        .ReadingOrder = xlContext
        .MergeCells = False
    End With
    Selection.Merge
    Range("A1:F3").Select
    Range("A3").Activate
    With Selection.Interior
        .Pattern = xlSolid
        .PatternColorIndex = xlAutomatic
        .ThemeColor = xlThemeColorAccent1
        .TintAndShade = 0.399975585192419
        .PatternTintAndShade = 0
    End With

```

```

End With

Range("J16").Select
ActiveCell.FormulaR1C1 = "POTENCIA DE SALIDA DE LOS INVERSORES Kw"
Range("M16").Select
ActiveCell.FormulaR1C1 = ""
Range("J16").Select
ActiveCell.FormulaR1C1 = "POTENCIA DE SALIDA DE LOS INVERSORES Kw"
Range("M16").Select
ActiveCell.FormulaR1C1 = ""
Range("J16:K17").Select
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlBottom
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
Selection.Merge
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = True
End With
Columns("J:J").ColumnWidth = 15.57

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Range("J16:K18").Select
Range("K18").Activate
With Selection
    .HorizontalAlignment = xlGeneral
    .VerticalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = True
End With
Selection.UnMerge
With Selection
    .HorizontalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
Selection.Merge
Range("J16:K18").Select
ActiveCell.FormulaR1C1 = "POTENCIA DE SALIDA" & Chr(10) & " DE LOS INVERSORES Kw"
Range("J16:K18").Select
ActiveCell.FormulaR1C1 = "POTENCIA DE SALIDA" & Chr(10) & " DE LOS PANELES Kw"
Range("J16:K18").Select
ActiveCell.FormulaR1C1 = "POTENCIA DE SALIDA" & Chr(10) & " DE LOS PANELES kWp"
Range("L16:M18").Select
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlBottom
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
Selection.Merge
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = True
End With
Range("J16:M18").Select
Selection.Borders(xlDiagonalDown).LineStyle = xlNone
Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeTop)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeBottom)
    .LineStyle = xlContinuous

```

```

        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideVertical)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideHorizontal)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
Range("J16:K18").Select
Selection.Font.Bold = True
With Selection.Interior
    .Pattern = xlSolid
    .PatternColorIndex = xlAutomatic
    .ThemeColor = xlThemeColorAccent1
    .TintAndShade = 0.399975585192419
    .PatternTintAndShade = 0
End With
Range("L16:M18").Select
ActiveCell.FormulaR1C1 = "=SUM(R[-12]C[-7]:R[8747]C[-7])"
Range("L19").Select
ActiveWindow.SmallScroll Down:=-16
Range("L16:M18").Select

```

```

Selection.Font.Bold = True
Range("J16:K18").Select
ActiveCell.FormulaR1C1 = "POTENCIA TOTAL " & Chr(10) & "DE SALIDA DE LOS " & Chr(10) & "PANELES kWp"
Range("J16:K19").Select
Range("J19").Activate
With Selection
    .HorizontalAlignment = xlGeneral
    .VerticalAlignment = xlCenter
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = True
End With
Selection.UnMerge
With Selection
    .HorizontalAlignment = xlCenter
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
Selection.Merge
Range("L16:M19").Select
Range("L19").Activate
With Selection
    .HorizontalAlignment = xlGeneral
    .VerticalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False

```

```

        .ReadingOrder = xlContext
        .MergeCells = True
    End With
    Selection.UnMerge
    With Selection
        .HorizontalAlignment = xlCenter
        .WrapText = False
        .Orientation = 0
        .AddIndent = False
        .IndentLevel = 0
        .ShrinkToFit = False
        .ReadingOrder = xlContext
        .MergeCells = False
    End With
    Selection.Merge
    Range("J16:M19").Select
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone
    With Selection.Borders(xlEdgeLeft)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeTop)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeBottom)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With

    With Selection.Borders(xlEdgeRight)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideVertical)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideHorizontal)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    ActiveWorkbook.Save

    MsgBox ("GUARDADO COMO MACROS EN TFG")
End Sub

```

Con la macro descrita a continuación, se combinan en un mismo archivo Excel todos archivos correspondientes a los datos de los años 2006 a 2015 descargados de Renewables.ninja para una misma ubicación.

```
Sub ConsolidateWorkbooks()  
  
    Dim FolderPath As String  
    Dim Filename As String  
    Dim Sheet As Worksheet  
  
    Application.ScreenUpdating = False  
    FolderPath = Environ("userprofile") & "\Desktop\COMBINAR\  
    Filename = Dir(FolderPath & "*.xls*")  
  
    Do While Filename <> ""  
        Workbooks.Open Filename:=FolderPath & Filename, ReadOnly:=True  
        For Each Sheet In ActiveWorkbook.Sheets  
            Sheet.Copy After:=ThisWorkbook.Sheets(1)  
        Next Sheet  
        Workbooks(Filename).Close  
        Filename = Dir()  
    Loop  
  
    Application.ScreenUpdating = True  
  
End Sub
```


La siguiente macro realiza el promedio de la potencia total anual de cada localidad estudiada entre los años 2006 y 2015 para tener un valor representativo.

```
Sub POTENCIAPROMEDIO()  
,  
, POTENCIAPROMEDIO Macro  
,  
,  
  
  Sheets("Hojal").Select  
  Sheets("Hojal").Name = "POTENCIA PROMEDIO"  
  Range("C8:E11").Select  
  With Selection  
    .HorizontalAlignment = xlCenter  
    .VerticalAlignment = xlBottom  
    .WrapText = False  
    .Orientation = 0  
    .AddIndent = False  
    .IndentLevel = 0  
    .ShrinkToFit = False  
    .ReadingOrder = xlContext  
    .MergeCells = False  
  End With  
  Selection.Merge  
  With Selection  
    .HorizontalAlignment = xlCenter  
    .VerticalAlignment = xlCenter  
    .WrapText = False  
    .Orientation = 0  
    .AddIndent = False  
    .IndentLevel = 0  
    .ShrinkToFit = False  
    .ReadingOrder = xlContext  
    .MergeCells = True  
  End With  
  
  Selection.Borders(xlDiagonalDown).LineStyle = xlNone  
  Selection.Borders(xlDiagonalUp).LineStyle = xlNone  
  With Selection.Borders(xlEdgeLeft)  
    .LineStyle = xlContinuous  
    .ColorIndex = 0  
    .TintAndShade = 0  
    .Weight = xlThin  
  End With  
  With Selection.Borders(xlEdgeTop)  
    .LineStyle = xlContinuous  
    .ColorIndex = 0  
    .TintAndShade = 0  
    .Weight = xlThin  
  End With  
  With Selection.Borders(xlEdgeBottom)  
    .LineStyle = xlContinuous  
    .ColorIndex = 0  
    .TintAndShade = 0  
    .Weight = xlThin  
  End With  
  With Selection.Borders(xlEdgeRight)  
    .LineStyle = xlContinuous  
    .ColorIndex = 0  
    .TintAndShade = 0  
    .Weight = xlThin  
  End With
```

```

Selection.Borders(xlInsideVertical).LineStyle = xlNone
Selection.Borders(xlInsideHorizontal).LineStyle = xlNone
Selection.AutoFill Destination:=Range("C8:H11"), Type:=xlFillDefault
Range("C8:H11").Select
Range("C8:E11").Select
Selection.Font.Bold = True
ActiveCell.FormulaR1C1 = "POTENCIA PROMEDIO SALIDA " & Chr(10) & "PANELES SOLARES kWp"
Range("C8:E11").Select
With Selection.Interior
    .Pattern = xlSolid
    .PatternColorIndex = xlAutomatic
    .ThemeColor = xlThemeColorAccent2
    .TintAndShade = 0.399975585192419
    .PatternTintAndShade = 0
End With
Range("F8:H11").Select
ActiveCell.FormulaR1C1 =
    "=AVERAGE('2015'!R[8]C[6]:R[11]C[7], '2014'!R[8]C[6]:R[11]C[7], "
    '2013'!R[8]C[6]:R[11]C[7], '2013'!R[8]C[6]:R[11]C[7], '2012'!R[8]C[6]:R[11]C[7],
    '2011'!R[8]C[6]:R[11]C[7], '2010'!R[8]C[6]:R[11]C[7], '2009'!R[8]C[6]:R[11]C[7],
    '2008'!R[8]C[6]:R[11]C[7], '2007'!R[8]C[6]:R[11]C[7], '2006'!R[8]C[6]:R[11]C[7])"
Range("F8:H11").Select
Selection.Font.Bold = True
ActiveWorkbook.Save

End Sub

```

ANEXO B

Esta macro tiene como objetivo insertar los datos de PVGIS en una hoja nueva para su tratamiento, así como agrupar los valores por columnas y reorganizarlos, ya que dichos valores vienen separados por comas. De esta forma se consigue una mejor interpretación y lectura de los mismos.

```
Sub INSERTAR_DATOS ()
'
' INSERTAR_DATOS Macro
'
'
    Sheets("DATOS PVGIS CON FORMATO").Select
    Columns("D:J").Select
    Selection.ColumnWidth = 14.57
    Range("D1:J1").Select
    Selection.AutoFill Destination:=Range("D1:J8796"), Type:=xlFillDefault
    Range("D1:J8796").Select
    ActiveWindow.ScrollRow = 8752
    ActiveWindow.ScrollRow = 8207
    ActiveWindow.ScrollRow = 3982
    ActiveWindow.ScrollRow = 3942
    ActiveWindow.ScrollRow = 3922
    ActiveWindow.ScrollRow = 3376
    ActiveWindow.ScrollRow = 809
    ActiveWindow.ScrollRow = 668
    ActiveWindow.ScrollRow = 607
    ActiveWindow.ScrollRow = 587
    ActiveWindow.ScrollRow = 566
    ActiveWindow.ScrollRow = 546
    ActiveWindow.ScrollRow = 506
    ActiveWindow.ScrollRow = 405
    ActiveWindow.ScrollRow = 283
    ActiveWindow.ScrollRow = 162
    ActiveWindow.ScrollRow = 102
    ActiveWindow.ScrollRow = 61
    ActiveWindow.ScrollRow = 1
    Sheets("DATOS PVGIS").Select
    Range("A1:A8783").Select
    Selection.Copy
    Sheets("DATOS PVGIS CON FORMATO").Select
    Range("D6").Select
End Sub
```

```

Range("D6").Select
ActiveSheet.Paste
Columns("D:D").ColumnWidth = 60.29
End Sub

```

```

Sub FORMATO_DATOS ()
'
' FORMATO_DATOS Macro
'
'
Sheets("DATOS PVGIS CON FORMATO").Select
Range("D4:D8788").Select
Selection.TextToColumns Destination:=Range("D4"), DataType:=xlDelimited, _
    TextQualifier:=xlDoubleQuote, ConsecutiveDelimiter:=False, Tab:=True, _
    Semicolon:=False, Comma:=True, Space:=False, Other:=False, FieldInfo _
    :=Array(Array(1, 1), Array(2, 1)), DecimalSeparator=".", ThousandsSeparator _
    :=",", TrailingMinusNumbers:=True
Range("D6:J8787").Select
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlBottom
    .WrapText = False
    .Orientation = 0
    .AddIndent = False
    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
With Selection
    .HorizontalAlignment = xlCenter
    .VerticalAlignment = xlCenter
    .WrapText = False
    .Orientation = 0
    .AddIndent = False

    .IndentLevel = 0
    .ShrinkToFit = False
    .ReadingOrder = xlContext
    .MergeCells = False
End With
Range("D6:E9").Select
Selection.Borders(xlDiagonalDown).LineStyle = xlNone
Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeTop)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeBottom)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideVertical)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0

```

```

        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideHorizontal)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    Range("D6:D9").Select
    Selection.Font.Bold = True
    Range("D12:E15").Select
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone
    With Selection.Borders(xlEdgeLeft)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeTop)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeBottom)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeRight)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideVertical)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideHorizontal)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    Range("D12:D15").Select
    Selection.Font.Bold = True
    Range("D16:J16").Select
    Selection.Font.Bold = True
    Range("D16:J8776").Select
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone
    With Selection.Borders(xlEdgeLeft)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeTop)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeBottom)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0

```

```

        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeRight)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideVertical)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlInsideHorizontal)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    Range("E16").Select
    With Selection.Interior
        .Pattern = xlSolid
        .PatternColorIndex = xlAutomatic
        .Color = 192
        .TintAndShade = 0
        .PatternTintAndShade = 0
    End With
    With Selection.Font
        .ThemeColor = xlThemeColorDark1
        .TintAndShade = 0
    End With
    Range("E17:E8776").Select
    With Selection.Interior
        .Pattern = xlSolid
        .PatternColorIndex = xlAutomatic
        .ThemeColor = xlThemeColorAccent2
        .TintAndShade = 0.599993896298105
        .PatternTintAndShade = 0
    End With
    ActiveWindow.ScrollRow = 1
    ActiveWindow.ScrollRow = 81
    ActiveWindow.ScrollRow = 1193
    ActiveWindow.ScrollRow = 5477
    ActiveWindow.ScrollRow = 6124
    ActiveWindow.ScrollRow = 6326
    ActiveWindow.ScrollRow = 6367
    ActiveWindow.ScrollRow = 6811
    ActiveWindow.ScrollRow = 7983
    ActiveWindow.ScrollRow = 8024
    ActiveWindow.ScrollRow = 8630
    ActiveWindow.ScrollRow = 8650
    ActiveWindow.ScrollRow = 8691
    ActiveWindow.ScrollRow = 8711
    ActiveWindow.ScrollRow = 8731
    ActiveWindow.ScrollRow = 8751
    ActiveWindow.ScrollRow = 8772
    Range("D8778:D8784").Select
    Selection.Borders(xlDiagonalDown).LineStyle = xlNone
    Selection.Borders(xlDiagonalUp).LineStyle = xlNone
    With Selection.Borders(xlEdgeLeft)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With
    With Selection.Borders(xlEdgeTop)
        .LineStyle = xlContinuous
        .ColorIndex = 0
        .TintAndShade = 0
        .Weight = xlThin
    End With

```

```

With Selection.Borders(xlEdgeBottom)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideVertical)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideHorizontal)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
Selection.Font.Bold = True
Range("D8787:E8787").Select
Selection.Borders(xlDiagonalDown).LineStyle = xlNone
Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeTop)
    .LineStyle = xlContinuous

    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeBottom)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideVertical)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideHorizontal)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
Selection.Font.Bold = True
Range("B8784").Select
Selection.AutoFill Destination:=Range("B8784:E8784"), Type:=xlFillDefault
Range("B8784:E8784").Select

```

' ELIMINAR_FILA_D Macro

```
Range("D6:E15").Select
Selection.Cut
Range("F4").Select
ActiveSheet.Paste
Columns("D:D").Select
Selection.Delete Shift:=xlToLeft
ActiveWindow.SmallScroll Down:=2
Columns("E:E").ColumnWidth = 41.14
Columns("E:E").ColumnWidth = 62.14
Range("E11:F13").Select
Range("E13").Activate
Selection.Borders(xlDiagonalDown).LineStyle = xlNone
Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeTop)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeBottom)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideVertical)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
With Selection.Borders(xlInsideHorizontal)
    .LineStyle = xlContinuous
    .ColorIndex = 0
    .TintAndShade = 0
    .Weight = xlThin
End With
Range("H6").Select
```

End Sub

Esta macro permite actualizar la gráfica dinámica del perfil de generación de potencia fotovoltaica instantánea en caso de que se introduzcan nuevos datos de la página de PVGIS.

```
Sub ACTUALIZAR ()
'
' ACTUALIZAR Macro
'
'
    Sheets("DATOS PVGIS CON FORMATO").Select
    ActiveWindow.ScrollRow = 8727
    ActiveWindow.ScrollRow = 6682
    ActiveWindow.ScrollRow = 1181
    ActiveWindow.ScrollRow = 1095
    ActiveWindow.ScrollRow = 922
    ActiveWindow.ScrollRow = 893
    ActiveWindow.ScrollRow = 519
    ActiveWindow.ScrollRow = 1
    Range("D16:D8776").Select
    Selection.Copy
    Sheets("PERFIL DE GENERACIÓN").Select
    Range("D1").Select
    ActiveSheet.Paste
    Range("F6").Select
    Application.CutCopyMode = False
    ActiveSheet.PivotTables("TablaDinámica1").PivotCache.Refresh
End Sub
```

ANEXO C

A continuación se detalla el código empleado para el formulario empleado para insertar los datos de la demanda de energía doméstica.

```
Private Sub INSERTAR_Click()

    Dim fila As Integer

    V_ALUMBRADO.SetFocus 'Se sitúa el cursor en la casilla para insertar la potencia del alumbrado

    Select Case LISTAMESES 'Se sitúa en la primera fila de cada mes
        Case "ENERO"
            fila = 4
            ActiveSheet.Cells(fila, 4).Activate
        Case "FEBRERO"
            fila = 28
            ActiveSheet.Cells(fila, 4).Activate
        Case "MARZO"
            fila = 52
            ActiveSheet.Cells(fila, 4).Activate
        Case "ABRIL"
            fila = 76
            ActiveSheet.Cells(fila, 4).Activate
        Case "MAYO"
            fila = 100
            ActiveSheet.Cells(fila, 4).Activate
        Case "JUNIO"
            fila = 124
            ActiveSheet.Cells(fila, 4).Activate
        Case "JULIO"
            fila = 148
            ActiveSheet.Cells(fila, 4).Activate
        Case "AGOSTO"
            fila = 172
            ActiveSheet.Cells(fila, 4).Activate
        Case "SEPTIEMBRE"
            fila = 196
            ActiveSheet.Cells(fila, 4).Activate
        Case "OCTUBRE"
            fila = 220
    End Select
End Sub
```

```

        ActiveSheet.Cells(fila, 4).Activate
    Case "NOVIEMBRE"
        fila = 244
        ActiveSheet.Cells(fila, 4).Activate
    Case "DICIEMBRE"
        fila = 268
        ActiveSheet.Cells(fila, 4).Activate
End Select

```

```

Select Case LISTAHORAS 'Una vez seleccionado el mes, se sitúa en función de la hora elegida
    Case "0:00 - 1:00"
        fila = fila
    Case "1:00 - 2:00"
        fila = fila + 1
    Case "2:00 - 3:00"
        fila = fila + 2
    Case "3:00 - 4:00"
        fila = fila + 3
    Case "4:00 - 5:00"
        fila = fila + 4
    Case "5:00 - 6:00"
        fila = fila + 5
    Case "6:00 - 7:00"
        fila = fila + 6
    Case "7:00 - 8:00"
        fila = fila + 7
    Case "8:00 - 9:00"
        fila = fila + 8
    Case "9:00 - 10:00"
        fila = fila + 9
    Case "10:00 - 11:00"
        fila = fila + 10
    Case "11:00 - 12:00"
        fila = fila + 11
    Case "12:00 - 13:00"

        fila = fila + 12
    Case "13:00 - 14:00"
        fila = fila + 13
    Case "14:00 - 15:00"
        fila = fila + 14
    Case "15:00 - 16:00"
        fila = fila + 15
    Case "16:00 - 17:00"
        fila = fila + 16
    Case "17:00 - 18:00"
        fila = fila + 17
    Case "18:00 - 19:00"
        fila = fila + 18
    Case "19:00 - 20:00"
        fila = fila + 19
    Case "20:00 - 21:00"
        fila = fila + 20
    Case "21:00 - 22:00"
        fila = fila + 21
    Case "22:00 - 23:00"
        fila = fila + 22
    Case "23:00 - 0:00"
        fila = fila + 23
End Select

```

```

'En función de si se marca o no el electrodoméstico, se inserta el valor de su potencia
If CH_ALUMBRADO = True Then
    ActiveSheet.Cells(fila, 3).Value = Val(V_ALUMBRADO)
Else
    ActiveSheet.Cells(fila, 3).Value = 0
End If

```

```

If CH_AC = True Then
    ActiveSheet.Cells(fila, 4).Value = Val(V_AC)
Else
    ActiveSheet.Cells(fila, 4).Value = 0
End If

If CH_FRIGORIFICO = True Then
    ActiveSheet.Cells(fila, 5).Value = Val(V_FRIGORIFICO)
Else
    ActiveSheet.Cells(fila, 5).Value = 0
End If

If CH_HORNO = True Then
    ActiveSheet.Cells(fila, 6).Value = Val(V_HORNO)
Else
    ActiveSheet.Cells(fila, 6).Value = 0
End If

If CH_LAVADORA = True Then
    ActiveSheet.Cells(fila, 7).Value = Val(V_LAVADORA)
Else
    ActiveSheet.Cells(fila, 7).Value = 0
End If

If CH_LAVAVAJILLAS = True Then
    ActiveSheet.Cells(fila, 8).Value = Val(V_LAVAVAJILLAS)
Else
    ActiveSheet.Cells(fila, 8).Value = 0
End If

If CH_TELEVISION = True Then
    ActiveSheet.Cells(fila, 9).Value = Val(V_TELEVISION)
Else
    ActiveSheet.Cells(fila, 9).Value = 0
End If

If CH_CONGELADOR = True Then
    ActiveSheet.Cells(fila, 10).Value = Val(V_CONGELADOR)
Else
    ActiveSheet.Cells(fila, 10).Value = 0
End If

If CH_SECADORA = True Then
    ActiveSheet.Cells(fila, 11).Value = Val(V_SECADORA)
Else
    ActiveSheet.Cells(fila, 11).Value = 0
End If

If CH_CALEFACCION = True Then
    ActiveSheet.Cells(fila, 12).Value = Val(V_CALEFACCION)
Else
    ActiveSheet.Cells(fila, 12).Value = 0
End If

'Se calcula la potencia a insertar del microondas teniendo en cuenta que éste no
'funciona toda una hora sino unos minutos

If CH_MICROONDAS = True Then
    ActiveSheet.Cells(fila, 13).Value = Val(V_MICROONDAS) * (Val(COEF_MICRO) / 60)
Else
    ActiveSheet.Cells(fila, 13).Value = 0
End If

```

```

If CH_ORDENADOR = True Then
    ActiveSheet.Cells(fila, 14).Value = Val(V_ORDENADOR)
Else
    ActiveSheet.Cells(fila, 14).Value = 0
End If

If CH_VITROCERAMICA = True Then
    ActiveSheet.Cells(fila, 15).Value = Val(V_VITROCERAMICA)
Else
    ActiveSheet.Cells(fila, 15).Value = 0
End If

If CH_PLANCHA = True Then
    ActiveSheet.Cells(fila, 16).Value = Val(V_PLANCHA)
Else
    ActiveSheet.Cells(fila, 16).Value = 0
End If

    If CH_ASPIRADORA = True Then
        ActiveSheet.Cells(fila, 17).Value = Val(V_ASPIRADORA)
    Else
        ActiveSheet.Cells(fila, 17).Value = 0
    End If

    If CH_OTROS = True Then
        ActiveSheet.Cells(fila, 18).Value = Val(V_OTROS)
    Else
        ActiveSheet.Cells(fila, 18).Value = 0
    End If

End Sub

Private Sub UserForm_Activate()

    'Valores que aparecen por defecto al abrir el formulario

    LISTAHORAS.AddItem ("0:00 - 1:00")
    LISTAHORAS.AddItem ("1:00 - 2:00")
    LISTAHORAS.AddItem ("2:00 - 3:00")
    LISTAHORAS.AddItem ("3:00 - 4:00")
    LISTAHORAS.AddItem ("4:00 - 5:00")
    LISTAHORAS.AddItem ("5:00 - 6:00")
    LISTAHORAS.AddItem ("6:00 - 7:00")
    LISTAHORAS.AddItem ("7:00 - 8:00")
    LISTAHORAS.AddItem ("8:00 - 9:00")
    LISTAHORAS.AddItem ("9:00 - 10:00")
    LISTAHORAS.AddItem ("10:00 - 11:00")
    LISTAHORAS.AddItem ("11:00 - 12:00")
    LISTAHORAS.AddItem ("12:00 - 13:00")
    LISTAHORAS.AddItem ("13:00 - 14:00")
    LISTAHORAS.AddItem ("14:00 - 15:00")
    LISTAHORAS.AddItem ("15:00 - 16:00")
    LISTAHORAS.AddItem ("16:00 - 17:00")
    LISTAHORAS.AddItem ("17:00 - 18:00")
    LISTAHORAS.AddItem ("18:00 - 19:00")
    LISTAHORAS.AddItem ("19:00 - 20:00")
    LISTAHORAS.AddItem ("20:00 - 21:00")
    LISTAHORAS.AddItem ("21:00 - 22:00")
    LISTAHORAS.AddItem ("22:00 - 23:00")
    LISTAHORAS.AddItem ("23:00 - 0:00")

```

```
LISTAMESES.AddItem ("ENERO")
LISTAMESES.AddItem ("FEBRERO")
LISTAMESES.AddItem ("MARZO")
LISTAMESES.AddItem ("ABRIL")
LISTAMESES.AddItem ("MAYO")
LISTAMESES.AddItem ("JUNIO")
LISTAMESES.AddItem ("JULIO")
LISTAMESES.AddItem ("AGOSTO")
LISTAMESES.AddItem ("SEPTIEMBRE")
LISTAMESES.AddItem ("OCTUBRE")
LISTAMESES.AddItem ("NOVIEMBRE")
LISTAMESES.AddItem ("DICIEMBRE")
```

```
V_ALUMBRADO = "40"
V_AC = "1500"
V_FRIGORIFICO = "300"
V_HORNO = "1800"
V_LAVADORA = "1900"
V_LAVAVAJILLAS = "1900"
V_TELEVISION = "300"
V_CONGELADOR = "110"
V_SECADORA = "1800"
V_CALEFACCION = "1700"
V_MICROONDAS = "1200"
V_ORDENADOR = "300"
V_VITROCERAMICA = "1300"
V_PLANCHA = " 1200"
V_ASPIRADORA = "1200"
V_OTROS = "250"
```

```
COEF_MICRO = "3"
```

```
' Se asigna la función de insertar los datos a la tabla al botón INSERTAR del formulario
Sub Botón2_Haga_clic_en()
```

```
Load CONSUMO
CONSUMO.Show
```

```
End Sub
```

```

' Elimina todos los datos de consumo doméstico
Sub VACIAR()
'
' VACIAR Macro
'
'
ActiveWindow.SmallScroll ToRight:=-19
Range("D4").Select
ActiveCell.FormulaR1C1 = "0"
Range("D4").Select
Selection.AutoFill Destination:=Range("D4:D10"), Type:=xlFillDefault
Range("D4:D10").Select
ActiveWindow.SmallScroll Down:=-5
Range("D4").Select
ActiveCell.FormulaR1C1 = ""
Range("D4").Select
Selection.AutoFill Destination:=Range("D4:D27"), Type:=xlFillDefault
Range("D4:D27").Select
Range("E23").Select
ActiveWindow.SmallScroll Down:=-7
Range("D4:D27").Select
Selection.AutoFill Destination:=Range("D4:S27"), Type:=xlFillDefault
Range("D4:S27").Select
ActiveWindow.SmallScroll Down:=3
ActiveWindow.SmallScroll ToRight:=-5
Range("D27:T27").Select
Selection.Borders(xlDiagonalDown).LineStyle = xlNone
Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
.LineStyle = xlContinuous
.ColorIndex = 0
.TintAndShade = 0
.Weight = xlMedium
End With
With Selection.Borders(xlEdgeTop)
.LineStyle = xlContinuous
.ColorIndex = 0
.TintAndShade = 0
.Weight = xlThin
End With
With Selection.Borders(xlEdgeBottom)
.LineStyle = xlContinuous
.ColorIndex = 0
.TintAndShade = 0
.Weight = xlThick
End With
With Selection.Borders(xlEdgeRight)
.LineStyle = xlNone
Selection.Borders(xlInsideHorizontal).LineStyle = xlNone
ActiveWindow.SmallScroll ToRight:=-10
ActiveWindow.SmallScroll Down:=-10
ActiveWindow.SmallScroll ToRight:=-5
Range("D4:T27").Select
Selection.Copy
ActiveWindow.SmallScroll ToRight:=-9
ActiveWindow.SmallScroll Down:=10
Range("D28").Select
ActiveSheet.Paste
ActiveWindow.SmallScroll Down:=25
Range("D52").Select
ActiveSheet.Paste
ActiveWindow.SmallScroll Down:=22
Range("D76").Select
ActiveSheet.Paste
ActiveWindow.SmallScroll Down:=24
Range("D100").Select
ActiveSheet.Paste
ActiveWindow.SmallScroll Down:=24
Range("D124").Select
ActiveSheet.Paste
Range("D124:T147,D124").Select
ActiveWindow.SmallScroll Down:=20

```

```

Range("D4:S147").Select
Range("D147").Activate
Application.CutCopyMode = False
Selection.Copy
ActiveWindow.SmallScroll ToRight:=-7
ActiveWindow.SmallScroll Down:=138
Range("D148").Select
ActiveSheet.Paste
ActiveWindow.SmallScroll Down:=142
Application.CutCopyMode = False
Range("A147").Select
End Sub

```

```

' Actualiza la tabla y la gráfica dinámica en caso de insertar nuevos datos

Sub ACTUALIZACONSUMO()
'
' ACTUALIZACONSUMO Macro
'
'
ActiveWindow.SmallScroll ToRight:=-8
Range("W11").Select
ActiveSheet.PivotTables("TablaDinámica3").PivotCache.Refresh
End Sub

```


ANEXO D

Gracias a esta macro se pueden actualizar la gráfica y la tabla dinámica que contienen los valores para graficar los perfiles de generación de potencia fotovoltaica y el consumo doméstico.

```
' Se actualiza la gráfica de los perfiles de consumo y generación
Sub ACTUALIZACIÓN()
'
' ACTUALIZACIÓN Macro
'
'
    ActiveWindow.SmallScroll ToRight:=-11
    Range("H6").Select
    ActiveSheet.PivotTables("TablaDinámica2").PivotCache.Refresh
    ActiveWindow.SmallScroll ToRight:=4
End Sub
```

ANEXO E

POTENCIA PANELES SOLARES: 3 kWp MONOFÁSICA TIR: 4% INVERSIÓN INICIAL: 2.697,44 € VIDA ÚTIL: 25 AÑOS

MECANISMO	PARÁMETRO	TENERIFE	MALLORCA	A CORUÑA	BILBAO	GERONA	CASTELLÓN	GUADALAJARA	PLASENCIA	CARTAGENA	CÓRDOBA	HUELVA
COMPENSACIÓN SIMPLIFICADA	AHORRO ANUAL [€]	830,78	743,83	578,59	521,82	729,85	715,78	753,46	798,00	813,69	827,88	854,10
COMPENSACIÓN SIMPLIFICADA	VAN [€]	10299,40	8941,20	6359,78	5472,88	8722,79	8502,97	9091,52	9787,37	10032,43	10254,12	10663,84
COMPENSACIÓN SIMPLIFICADA	TIR	0,31	0,28	0,21	0,19	0,27	0,27	0,28	0,30	0,30	0,31	0,32
COMPENSACIÓN SIMPLIFICADA	PERIODO RECUPERACIÓN [AÑOS]	4	4	6	6	5	5	4	4	4	4	4
SIN INYECTAR EXCEDENTES	AHORRO ANUAL [€]	758,34	654,42	532,44	478,20	642,96	648,86	669,39	714,65	727,71	744,42	770,85
SIN INYECTAR EXCEDENTES	VAN [€]	9167,80	7544,30	5638,81	479,48	7365,27	7457,47	7778,18	8485,36	8689,27	8950,43	9363,29
SIN INYECTAR EXCEDENTES	TIR	0,28	0,24	0,20	0,18	0,24	0,24	0,25	0,27	0,27	0,28	0,29
SIN INYECTAR EXCEDENTES	PERIODO RECUPERACIÓN [AÑOS]	4	5	4	7	5	5	5	5	5	4	4

Tabla 1. Parámetros económicos según localidad para una instalación monofásica de 3 kWp de potencia, TIR: 4 %, inversión inicial: 2.697,44 € y vida útil de 25 años. Fuente: elaboración propia

POTENCIA PANELES SOLARES: 6 kWp MONOFÁSICA TIR: 4% INVERSIÓN INICIAL: 4.165,56 € VIDA ÚTIL: 25 AÑOS

MECANISMO	PARÁMETRO	TENERIFE	MALLORCA	A CORUÑA	BILBAO	GERONA	CASTELLÓN	GUADALAJARA	PLASENCIA	CARTAGENA	CÓRDOBA	HUELVA
COMPENSACIÓN SIMPLIFICADA	AHORRO ANUAL [€]	1356,10	1279,60	1018,29	928,73	1270,58	1240,89	1290,87	1338,66	1382,61	1399,52	1402,57
COMPENSACIÓN SIMPLIFICADA	VAN [€]	17019,56	15824,39	11742,18	10343,12	15683,53	15219,72	16000,57	16747,05	17433,69	17697,83	17745,43
COMPENSACIÓN SIMPLIFICADA	TIR	0,33	0,31	0,24	0,22	0,30	0,30	0,31	0,32	0,33	0,34	0,34
COMPENSACIÓN SIMPLIFICADA	PERIODO RECUPERACIÓN [AÑOS]	4	4	5	6	4	4	4	4	4	4	4
SIN INYECTAR EXCEDENTES	AHORRO ANUAL [€]	1011,16	919,10	772,57	710,41	901,15	908,88	933,01	980,27	1003,69	1018,65	1034,59
SIN INYECTAR EXCEDENTES	VAN [€]	11630,81	10192,74	7903,61	6932,51	9912,21	10033,01	10410,06	11148,32	11514,19	11747,87	11996,90
SIN INYECTAR EXCEDENTES	TIR	0,24	0,22	0,18	0,17	0,21	0,22	0,22	0,23	0,24	0,24	0,25
SIN INYECTAR EXCEDENTES	PERIODO RECUPERACIÓN [AÑOS]	5	6	7	7	6	6	6	5	5	5	5

Tabla 2. Parámetros económicos según localidad para una instalación monofásica de 6 kWp de potencia, TIR: 4 %, inversión inicial: 4.165,56 € y vida útil de 25 años. Fuente: elaboración propia

POTENCIA PANELES SOLARES: 10 kWp TRIFÁSICA TIR: 4% INVERSIÓN INICIAL: 14.182,20 € VIDA ÚTIL: 25 AÑOS

MECANISMO	PARÁMETRO	TENERIFE	MALLORCA	A CORUÑA	BILBAO	GERONA	CASTELLÓN	GUADALAJARA	PLASENCIA	CARTAGENA	CÓRDOBA	HUELVA
COMPENSACIÓN SIMPLIFICADA	AHORRO ANUAL [€]	1593,44	1548,37	1316,45	1334,92	1578,78	1574,44	1558,60	1569,03	1637,53	1653,33	1638,03
COMPENSACIÓN SIMPLIFICADA	VAN [€]	10710,67	10006,58	6383,46	6671,96	10481,58	10413,77	10166,31	10329,28	11399,41	11646,21	11407,30
COMPENSACIÓN SIMPLIFICADA	TIR	0,10	0,10	0,08	0,08	0,10	0,10	0,10	0,10	0,11	0,11	0,11
COMPENSACIÓN SIMPLIFICADA	PERIODO RECUPERACIÓN [AÑOS]	12	12	15	15	12	12	12	12	11	11	11
SIN INYECTAR EXCEDENTES	AHORRO ANUAL [€]	1073,03	1001,28	886,68	821,86	985,20	989,75	1015,74	1050,99	1068,31	1079,09	1095,47
SIN INYECTAR EXCEDENTES	VAN [€]	2580,84	1459,89	-330,45	-1342,98	1208,64	1279,73	1685,73	2236,43	2506,95	2675,41	2931,34
SIN INYECTAR EXCEDENTES	TIR	0,06	0,05	0,04	0,03	0,05	0,05	0,05	0,05	0,06	0,06	0,06
SIN INYECTAR EXCEDENTES	PERIODO RECUPERACIÓN [AÑOS]	20	22	27	30	22	22	21	20	20	20	19

Tabla 3. Parámetros económicos según localidad para una instalación trifásica de 10 kWp de potencia, TIR: 4 %, inversión inicial: 14.182,20 € y vida útil de 25 años. Fuente: elaboración propia

POTENCIA PANELES SOLARES: 14 kWp TRIFÁSICA TIR: 4% INVERSIÓN INICIAL: 18.079,04 € VIDA ÚTIL: 25 AÑOS

MECANISMO	PARÁMETRO	TENERIFE	MALLORCA	A CORUÑA	BILBAO	GERONA	CASTELLÓN	GUADALAJARA	PLASENCIA	CARTAGENA	CÓRDOBA	HUELVA
COMPENSACIÓN SIMPLIFICADA	AHORRO ANUAL [€]	1678,75	1680,88	1436,78	1478,94	1684,67	1684,67	1671,37	1655,83	1684,67	1684,67	1684,67
COMPENSACIÓN SIMPLIFICADA	VAN [€]	8146,49	8179,79	4366,47	5025,12	8239,04	8239,04	8031,25	7788,50	8239,04	8239,04	8239,04
COMPENSACIÓN SIMPLIFICADA	TIR	0,08	0,08	0,06	0,06	0,08	0,08	0,08	0,08	0,08	0,08	0,08
COMPENSACIÓN SIMPLIFICADA	PERIODO RECUPERACIÓN [AÑOS]	15	15	18	18	15	15	15	15	15	15	15
SIN INYECTAR EXCEDENTES	AHORRO ANUAL [€]	1094,62	1039,38	947,63	882,26	1021,77	1024,93	1051,72	1081,39	1093,84	1099,46	1120,44
SIN INYECTAR EXCEDENTES	VAN [€]	-978,80	-1841,78	-3275,02	-4296,27	-2116,79	-2067,47	-1649,06	-1185,50	-990,96	-902,78	-575,51
SIN INYECTAR EXCEDENTES	TIR	0,03	0,03	0,02	0,02	0,03	0,03	0,03	0,03	0,03	0,04	0,04
SIN INYECTAR EXCEDENTES	PERIODO RECUPERACIÓN [AÑOS]	28	31	37	44	32	32	30	29	28	28	27

Tabla 4. Parámetros económicos según localidad para una instalación trifásica de 14 kWp de potencia, TIR: 4 %, inversión inicial: 18.079,04 € y vida útil de 25 años. Fuente: elaboración propia

POTENCIA PANELES SOLARES: 20 kWp TRIFÁSICA TIR: 4% INVERSIÓN INICIAL: 23.924,30 € VIDA ÚTIL: 25 AÑOS

MECANISMO	PARÁMETRO	TENERIFE	MALLORCA	A CORUÑA	BILBAO	GERONA	CASTELLÓN	GUADALAJARA	PLASENCIA	CARTAGENA	CÓRDOBA	HUELVA
COMPENSACIÓN SIMPLIFICADA	AHORRO ANUAL [€]	1684,67	1684,67	1566,99	1603,90	1684,67	1684,67	1684,67	1684,67	1684,67	1684,67	1684,67
COMPENSACIÓN SIMPLIFICADA	VAN [€]	2393,78	2393,78	55,28	1131,98	2393,78	2393,78	2393,78	2393,78	2393,78	2393,78	2393,78
COMPENSACIÓN SIMPLIFICADA	TIR	0,05	0,05	0,04	0,04	0,05	0,05	0,05	0,05	0,05	0,05	0,05
COMPENSACIÓN SIMPLIFICADA	PERIODO RECUPERACIÓN [AÑOS]	22	22	25	24	22	22	22	22	22	22	22
SIN INYECTAR EXCEDENTES	AHORRO ANUAL [€]	1111,45	1067,51	1001,52	939,54	1049,04	1055,47	1080,52	1104,77	1111,34	1114,69	1139,06
SIN INYECTAR EXCEDENTES	VAN [€]	-6561,13	-7247,54	-8278,47	-9246,68	-7536,14	-7435,67	-7044,35	-6665,49	-6562,89	-6510,59	-6129,86
SIN INYECTAR EXCEDENTES	TIR	0,01	0,01	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,01	0,01
SIN INYECTAR EXCEDENTES	PERIODO RECUPERACIÓN [AÑOS]	51	58	80	100	63	61	56	52	51	50	47

Tabla 5. Parámetros económicos según localidad para una instalación trifásica de 20 kWp de potencia, TIR: 4 %, inversión inicial: 23.924,30 € y vida útil de 25 años. Fuente: elaboración propia